



Ver. HB230911

Hieff Unicon™ Universal Multiplex qPCR Master Mix (Probe Based)

Product description

Hieff Unicon™ Universal Blue qPCR Master Mix (Dye Based) is a pre-solution for 2 × real-time quantitative PCR amplification characterized by high sensitivity and specificity, is blue in color, and has the effect of sample addition. This product is a 2 × Mix pre-mixed reagent that enables up to four fluorescent quantitative PCR reactions in a single reaction well. This product contains the genetically modified antibody method to hot-start Taq enzyme, greatly improving the amplification sensitivity and specificity. At the same time, this product has deeply optimized the multi-reaction buffer, which can improve the amplification efficiency of the reaction and promote the effective amplification of low-concentration templates. This product can be used for genotyping and multiplex quantitative analysis.

Components

Components No.	Name	11211ES03	11211ES08	11211ES09
11211	Hieff Unicon™ Universal Multiplex qPCR Master Mix (Probe Based)	1 mL	5 × 1 mL	5 mL
Components No.	Name	11211ES20	11211ES60	11211ES61
11211	Hieff Unicon™ Universal Multiplex qPCR Master Mix (Probe Based)	20 mL	100 × 1 mL	100 mL

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, iCycler iQ, iQ5, MyiQ, MiniOpticon, Opticon, Opticon 2, Chromo4; Eppendorf: Mastercycler ep realplex, realplex 2 s; 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 Cyclers; Cepheid: SmartCycler; Illumina: Eco qPCR.

Shipping and Storage

The product is shipped with dry ice and can be stored at -15°C ~ -25°C for 2 year.

Instructions

1. Reaction System

Components	Volume (μL)	Final Concentration
2× Hieff Unicon™ Universal TaqMan multiplex qPCR master mix	12.5	1×
Primer mix (10 μmol/L)	x	0.1-0.5 μmol/L
Probe mix (10 μmol/L)	x	50-250 nmol/L
Rox reference dye	0.5	1×
Template DNA/cDNA	1-10	-
ddH ₂ O	up to 25	-

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

- 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.
- 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.
- 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#10200 is recommended if needed.
- Template dilution: qPCR is highly sensitive, and it is recommended to dilute the template for use. If the template is a cDNA stock solution, the template volume should not exceed 1/10 of the total volume.
- Reaction system: 25 μL, 30 μL or 50 μL is recommended to ensure the effectiveness and repeatability of target gene amplification.
- System preparation: Please prepare in the super clean bench, and use the tips and reaction tubes without nuclease residue; it is recommended to use the tips with filter cartridges. Avoid cross contamination and aerosol contamination.

2. Reaction program

Cycle step	Temp.	Time	Cycles
Initial denaturation	95°C	5 min	1
Denaturation	95°C	15 s	45
Annealing/Extension	60°C	30 s	

[Note]: a) Annealing/Extension: The temperature and time can be appropriately adjusted according to the designed primer T_m value.

b) 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

Please wear the necessary PPE, such lab coat and gloves, to ensure your health and safety!