

10 × D-Taq PCR Buffer (with MgCl₂)

Product description

10× D-Taq PCR Buffer (with MgCl₂) combined with D-Taq hot-start enzyme can complete the single and multiple amplification of the target gene fragment, which is suitable for fluorescence quantitative and general PCR. The 10× D-Taq PCR Buffer does not contain Mg²⁺, dNTP and dUTP, so it needs to be added additionally. In addition, factors that effectively inhibit nonspecific PCR amplification and factors that improve the amplification efficiency of multiple qPCR reactions are added, so that quadruple reactions can be carried out while ensuring the amplification efficiency of primers.

Specifications

Cat.No.	11373ES03
Size	1 mL

Components

Components No.	Name	11373ES03
11373-A	10× D-Taq PCR Buffer	1 mL
11373-B	250 mM MgCl ₂	250 µL

Storage

The kit should be stored at -25~-15°C for 1 years.

Applicable instrument models

Need to add High Rox applicable models: ABI 5700, 7000, 7300, 7700, 7900HT Fast, StepOne™, StepOne Plus™

Need to add Low Rox applicable models:

ABI 7500, 7500 Fast, ViiA™7, QuantStudio™ 3 and 5, QuantStudio™ 6,7,12k Flex

Stratagene MX3000P™, MX3005P™, MX4000P™

Instrument models that do not require Rox Correction:

Bio-Rad CFX96™, CFX384™, iCycler iQ™, iQ™5, 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

Thermo Scientific PikoReal Cycler; **Cepheid** SmartCycler®; **Illumina** Eco qPCR

Notes

1. Please use RNase-free consumables during the experiment.
2. For your safety and health, please wear a lab coat and disposable gloves during operation.

Instructions

1. Reaction System

Cat.No.	Components	Volume (μL)	Volume (μL)
11373-A	10× D-Taq PCR Buffer	3	2.5
11373-B	MgCl ₂ (250 mM)	0.3-0.72	0.25-0.6
10124	dNTP Mix (10 mM each)	1.05	0.875
10128	dUTP, 10 mM	0.12	0.1
Self-equipped reagents	Primer/Probe Mix (10 μM)	1	1
	DNA or cDNA	1-10	1-10
-	RNase Free H ₂ O	to 30 μL	To 25 μL

【Note】 : Be sure to mix thoroughly before use to avoid violent shaking to produce too many bubbles.

- a) Primer concentration: Primer Mix contains multiple pairs of primers, usually the final concentration of each primer is 0.25 μM, and can also be adjusted between 0.1-1.0 μM according to the situation.
- b) Probe concentration: Probe Mix contains multiple probes with different fluorescent signals, and the concentration of each probe can be adjusted between 50-300 nM according to the specific situation.
- c) Template dilution: qPCR is extremely sensitive, it is recommended to dilute the template and control the CT between 20-35.
- d) Reaction system: It is recommended to use 25 or 30 μL to ensure the effectiveness and repeatability of target gene amplification.
- e) System preparation: Please prepare in a clean bench and use a gun tip and reaction tube without nuclease residue; it is recommended to use a gun tip with a filter. Avoid cross contamination and aerosol contamination.

2. Reaction Program

Cycle steps	Temperature (°C)	Time	Cycles
Predenaturation	95	5 min	1
Denaturation	95	15 sec	45
Annealing&Extension	60*	30 sec*	
Final extension	72	5-10 min	1

【Note】 :

- a) Amplification reaction: The amplification reaction temperature is adjusted according to the designed primer T_m value.
- b) Fluorescence signal acquisition: Different qPCR detection instruments require different fluorescence signal acquisition times. Please set it according to the shortest time limit.