Ver. HB221109

2× Hieff™ Canace™ Plus PCR Master Mix (with Dye)

Product description

2×Hieff™ Canace™ Plus PCR Master Mix (With Dye) is a ready-to-use 2×premixed solution containing Hieff™ Canace™ Plus High-Fidelity DNA Polymerase, dNTPs, and optimized buffer. Two monoclonal antibodies at room temperature that inhibit polymerase activity and 3'→5' exonuclease activity are added to the master mix for easily and highly specific Hot Start PCR. The extension factor is added to the master mix to give the enzyme a long fragment amplification capacity, the length of the amplification t can be up to 13 kb, the enzyme has a 5'→3' DNA polymerase activity and a 3'→5' exonuclease activity, its fidelity is 83 times that of Taq DNA polymerase, which is 9 times that of ordinary Pfu DNA polymerase. It is suitable for amplification of complex templates, the amplification product is a blunt end.

2×Hieff™ Canace™ Plus PCR Master Mix (With Dye) has the advantages of fast and easy, high sensitivity, strong specificity, good stability, etc., the reaction system only needs to add primers and templates, and can be amplified by a two-step protocol, simplifying the experimental steps and saving time. This product contains electrophoresis indicator dyes, and PCR products can be used directly for electrophoresis. In addition, the product also contains a specific protective agent, so that the master mix can maintain stable activity after repeated freeze-thaw.

Components

Components No.	Name	10154ES01	10154ES03	10154ES08
10154	2×Hieff™ Canace™ Plus PCR Master Mix (With Dye)	100 μL	1 mL	5×1mL

Specifications

Product specification	Master Mix
Concentration	2×
Hot Start	Built-in Hot Start
Overhang	Blunt
Reaction speed	Rapid
Size (Final Product)	Up to 13kb
Conditions for transportation	Dry ice
Product type	High fidelity PCR premixes

Shipping and Storage

The product is shipped with dry ice and can be stored at -25℃ ~ -15℃ for 1 years.

Instructions

PCR reaction system

Components	Volume

ddH_2O	To 50 μL
2×Hieff™ Canace™ Plus PCR Master Mix (With Dye)	25 μL
DNA template	X
Primer-F (10 μmol/L)	2 μL
Primer-R (10 μmol/L)	2 μL

Recommended templates dosage (25 μL volume)

Templates	Amplify fragments from 1kb to 10 kb
genomic DNA	50 ng-200 ng
plasmid or viral DNA	10 pg-20 ng
cDNA	1-2.5 μL (Do not exceed 10% of the final PCR reaction volume)

Amplification reaction protocol

Two-Step Protocol (complexity template)

Cycle step	Temperature	Time	Cycles
Initial denaturation	98°C	3 min	1
Denaturation	98°C	10 sec	30-35
Extension	68°C	30 sec/kb	
Final extension	72°C	5 min	1

Three-Step Protocol (regular protocol)

Cycle step	Temperature	Time	Cycles
Initial denaturation	98°C	3 min	1
Denaturation	98°C	10 sec	30-35
Annealing	60°C	20 sec	
Extension	72°C	30 sec/kb	
Final extension	72°C	5 min	1

Annealing Gradient Protocol (complexity template)

Cycle step	Temperature	Time	Cycles
Initial denaturation	98°C	3 min	1
Denaturation	98°C	10 sec	15, -1°C/cycle
Gradient annealing	70-55°C	20 sec	
Extension	72°C	30 sec/kb	
Denaturation	98°C	10 sec	20
Annealing	55°C	20 sec	
Extension	72°C	30 sec/kb	
Final extension	72°C	5 min	1

Features under different amplification protocol

Protocol	Two-Step	Three-step	Gradient annealing
Speed	fast	medium	slow
Specificity	high	medium	high
PCR yield	medium	high	medium

Detection rate	high	medium	high

Notes

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