PerfectStart® V Probe SNP Genotyping SuperMix UDG

Please read the manual carefully before use.

Cat. No. AQ744

Version No. Version 1.0

Storage: at -18˚C or below for two years

Description

PerfectStart® V Probe SNP Genotyping SuperMix UDG is a pre-mix reagent designed for single nucleotide polymorphism (SNP) genotyping using probe-based method. It is supplied at a 2× concentration, only add primers, Taqman-MGB probe and template to perform reaction and complete SNP genotyping. This product contains newly upgraded *PerfectStart*® V Taq Hot-Start DNA Polymerase (Genetically modified Taq DNA polymerase with extremely high specificity), enabling accurate genotyping for different samples with extremely high specificity. The dUTP/UDG in the SuperMix can function at room temperature to eliminate carry-over contamination caused by PCR products and aerosol contamination, ensuring the accuracy of results.

Applications

A wide range of applications: Human disease diagnosis, animal disease diagnosis, pet disease diagnosis, and etc.

Features

- Hot start Taq DNA Polymerase blocking by antibodies, enabling high sensitivity, high amplification efficiency, and a wide range of applicable species.
- Good genotyping performance and high specificity.
- The dUTP/UDG anti-contamination system is used to effectively prevent carry-over contamination of PCR products, ensuring the accuracy of results.
- Universal Passive Reference Dye for different instruments to correct differences in fluorescence detection between wells due to pipetting errors.

Kit Contents

Component	AQ744-01
2×*PerfectStart*® V Probe SNP Genotyping SuperMix UDG	5×1 ml
Universal Passive Reference Dye（50×）	200 µl
Nuclease-free Water	5 ml

Recommended qPCR System and Conditions (taking 20 µl reaction system as an example)

Component	Volume	Final Concentration
Template	4 µl	as required
Forward Primer（10 µM）	0.4 µl	0.2 µM
Reverse Primer（10 µM）	0.4 µl	0.2 µM
TaqMan Probe（10 µM）	0.4 µl	0.2 µM
2×*PerfectStart*® V Probe SNP Genotyping SuperMix UDG	10 µl	1×
Universal Passive Reference Dye（50×）（optional）	0.4 µl	1×
Nuclease-free Water	Variable	-
Total Volume		20 µl

* Note: Be sure to thaw thoroughly and mix well before use, avoid excessive bubbles caused by vigorously shaking, and the amount of each component in the reaction system can be adjusted according to the following principles:

- Primer concentration: If the system contains multiple pairs of primers, usually the final concentration of each primer is 0.2 μM, which can obtain a better amplification effect, and the primer concentration can also be adjusted within 0.1~0.5 μM according to the reaction results.
- Probe concentration: If the system contains multiple probes with different fluorescence signals, the final concentration of each probe is usually 0.2 μM, which can be adjusted within 50~250 nM.

Reaction Program (Two-Step)

1) Standard Procedure

Step	Temperature	Time	Cycle
Pre-denaturation	95℃	5 min	1
Denaturation	95℃	5 sec	40~45 cycles
Annealing/Extension (Fluorescence Signal Acquisition)	60℃	15 sec	

Instrument models suitable for Universal Passive Reference Dye

• ABI Prism 7000/7300/7700/7900, ABI Step One, ABI Step One Plus, ABI 7900HT, ABI 7900HT Fast; ABI Prism 7500, ABI Prism 7500 Fast, ABI QuantStudio Dx/3/5, ABI QuantStudio 6/7/12K Flex, ABI ViiA 7, Stratagene Mx3000P/Mx3005P/Mx4000

No Passive Reference Dye

• Roche LightCycler 480, Roche Light Cycler 96, MJ Research Chromo4, MJ Research Opticon 2, Takara TP-800,Bio-Rad iCycler iQ, Bio-Rad iCycler iQ5, Bio-Rad CFX96, Bio-Rad C1000 Thermal Cycler, Thermo Scientific Pikoreal 96, Qiagen Corbett Rotor-Gene 6000, Qiagen Corbett Rotor-Gene G, Qiagen Corbett Rotor-Gene Q, Qiagen Corbett Rotor-Gene 3000, Mastercycler ep realplex

For research use only, not for clinical diagnosis.

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