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Super Start Probe qPCR Mix (UDG, for-Lyo)

Product Number: PCK106

Shipping and Storage

-20℃.

Components

Component	PCK106
2×Super Start Probe qPCR Mix (UDG, for-Lyo)	5ml
RNase Free Water	5ml
ROX I	200μl
ROX II	200μl

1. The Real Time PCR instrument calibrated with ROX I includes:
   ABI 5700/7000/7300/7700/7900/7900 HT/7900 HT Fast,ABI StepOne/StepOnePlus and other instruments.
2. The Real Time PCR instrument calibrated with ROX II includes:
   ABI 7500/7500 Fast;ABI ViiA7;ABI Q6,ABI Quant Studio 6/7 Flex;Stratagene MX4000/MX3005P/MX3000P and other instruments.
3. Real Time PCR instruments that do not require ROX calibration include:
   Bio-Rad CFX96/CFX 384/iCycler iQ5/iQ/My iQ5/MiniOpticon/Opticon/Opticon 2/Chromo4； Eppendorf Mastercycler ep realplex /realplex 2s；Cepheid SmartCycler；Illumina Eco qPCR；Roche Applied Science LightCycler 480；Thermo Scientific PikoReal Cycler； Qiagen/Corbett Rotor-Gene Q/Rotor-Gene 3000/ Rotor-Gene 6000 and other instruments.

Description

Super Start Probe qPCR Mix (UDG, for Lyo) is a reagent that uses TaqMan probe method for Real Time PCR; This product is a liquid reagent pre mixed with HotStartTaq DNA polymerase, UDG enzyme, optimized reaction buffer, dNTPs, protectants, and excipients. The liquid reagent does not contain glycerol or other components that affect freeze-drying, and can be directly used for the preparation of freeze-dried samples to improve the stability and usability of the samples. When conducting experiments, primers, probes, templates, and water can be added to prepare the PCR reaction solution.

The introduction of dUTP/UDG anti pollution system into the formulation can effectively remove pollutants present in the system. At the same time, when the reaction system is heated to 90-95℃, UDG enzymes are completely inactivated, which can maintain cDNA integrity. This product can add multiple pairs of primers to perform multiple fluorescent quantitative PCR reactions on multiple genes in a single reaction well.

This product is a freeze-dried liquid reagent prepared using a special process to prepare HotStartTaq DNA polymerase, combined with a specially optimized reaction and freeze-drying formula. It can effectively inhibit non-specific reactions, improve reaction specificity and amplification efficiency, and accurately quantify over a wider range. And equipped with ROX Reference Dyes of different concentrations, used for correcting inter well fluorescence signal errors with different instruments.

Features

1. This product can be used to make freeze-dried powder or freeze-dried balls, and primer probes can be added for freeze-drying;
2. High specificity: The HotStart Taq DNA polymerase prepared by a special process greatly improves the specificity of PCR amplification;
3. Efficient: The carefully formulated Real Time PCR specific 2×SuperMix has higher amplification efficiency and sensitivity;
4. Quick: The necessary reagents for PCR reaction are collected in one tube, and the reaction system can be prepared in a few minutes.

Quality control

Purity testing: All components have been tested and found to have no residual endonucleases or exonucleases.

Suggestion

1. Please use new (non polluting) gun heads, microtubes, etc. for the preparation and packaging of the reaction solution to avoid contamination.
2. Primer design: Generally, in order to increase sensitivity and amplification efficiency while suppressing non-specific reactions, the shorter the amplification target sequence, the better, usually below 200bp.

Protocol

1. Preparation and use of freeze-dried powder samples
   1.1. Add 2×Super Start Probe qPCR Mix (UDG, for Lyo) prepares freeze-dried samples according to requirements;
   1.2. Add the freeze-dried sample to RNase Free Water for dissolution and use; The remaining dissolved reagents should be stored at -20℃ to avoid repeated freeze-thaw cycles as much as possible.
2. Preparation of freeze-dried microsphere system
   2.1. Prepare freeze-dried small ball system according to the following commonly used systems (20μl)

2×Super Start Probe qPCR Mix (UDG,for-Lyo)	10μl
Upstream primer	0.2-1.0μM(Final Conc.)
Downstream primer	0.2-1.0μM(Final Conc.)
Probe(10μM)	0.4μl
RNase Free Water	Up to 20μl

   2.2. Freeze dry the above liquid samples;
   2.3. After freeze-drying, the sample is re dissolved according to the following table:

Freeze dried small balls	1 piece
RNase Free Water	(20-X*)μl

*Where X is the template and ROX (to be selected based on machine model) dosage

   2.4. After ensuring that the sample has been completely dissolved, add the template and ROX (depending on the machine model) for PCR reaction.
3. Common PCR cycles

Step	Cycle	Temperature	Time
Pollution digestion	1	50℃	2min
Pre denaturation	1	95℃	5min
Denaturation	40-45	95℃	10s
Annealing/Extension		60℃	40s

Note

1. Be sure to mix thoroughly before use to avoid excessive bubbles caused by violent shaking.
2. QPCR has high sensitivity, it is recommended to dilute the template and control the Ct value between 20-35 appropriately.
3. This product already contains freeze-dried excipients. If other freeze-dried excipients need to be added, they need to be evaluated based on actual testing data before being added.
4. If there is any residue after re dissolving the product, please store it at -20 ℃ to avoid repeated freeze-thaw cycles that may affect its use.