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# Super Start Probe qPCR Mix (UDG, Lyo)

**Product Number: PCK006LY**

## Shipping and Storage

-20℃.

## Components

| Component | PCK006LY |
|---|---|
| 2×Super Start Probe qPCR Mix (UDG, Lyo) | 5 vials |
| ROX I | 200μl |
| ROX II | 200μl |
| RNase Free Water | 1ml×10 |

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, Lyo) is a reagent that uses TaqMan probe method for Real Time PCR; This product is a freeze-dried powder made by pre mixing HotStart Taq DNA polymerase, UDG enzyme, optimized reaction buffer, dNTPs, protectants, and excipients. The freeze-dried powder has a uniform appearance, a block like or sponge like structure, and dense pores. Simply add RNase Free Water to quickly dissolve into a 2×concentration premixed reagent. During the experiment, primers, probes, templates, and water are 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 is prepared using a special process to produce HotStart Taq DNA polymerase, combined with a specially optimized reaction and freeze-drying formula to produce a freeze-drying reagent. 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. Adding RNase Free Water can quickly dissolve;
2. No need for cold chain transportation, can be stored at room temperature and 2-8℃;
3. High specificity: The HotStart Taq DNA polymerase prepared by a special process greatly improves the specificity of PCR amplification;
4. Efficient: The carefully formulated Real Time PCR specific 2×SuperMix has higher amplification efficiency and sensitivity;
5. 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, exonucleases, or nucleic acid residues. The moisture content of freeze-dried powder is less than 3%.

## 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. Dissolve freeze-dried products

   Add 1ml of RNase Free Water to each bottle to dissolve the freeze-dried product. The dissolved product is 2×Super Start Probe qPCR Mix (UDG, Lyo); The dissolved reagent can be stored at -20℃ and can be used directly after melting in the next experiment.

2. Common reaction systems (20μl)

| | |
|---|---|
| 2×Super Start Probe qPCR Mix (UDG, Lyo) | 10μl |
| Upstream primers | 0.2-1.0μM(Final Conc.) |
| Downstream primers | 0.2-1.0μM(Final Conc.) |
| Probe (10μM) | 0.4μl |
| Template | 1-2μl |
| ROX (to be selected based on machine model) | 0.4μl |
| RNase Free Water | Up to 20μl |

3. Common PCR cycles*

   *The two-step method can achieve high specificity, while the three-step method can achieve high amplification rate.

   3.1. Two step amplification program:

| Temperature | Time | Cycles |
|---|---|---|
| 50℃ | 2min | |
| 95℃ | 5min | |
| 95℃ | 10s | 45-50 |
| 60℃ | 40s | |

   3.2. Three step PCR amplification program:

| Temperature | Time | Cycles |
|---|---|---|
| 50℃ | 2min | |
| 95℃ | 5min | |
| 95℃ | 10s | 45-50 |
| 50-60℃ | 40s | |
| 72℃ | 30s | |