Super LongTaq Green PCR Mix

For research use only

Cat. No./Spec.

Cat. No	*K035-A*	*K035-B*	*K035-C*
50-μl reaction Nos.	*40 rxns*	*200 rxns*	*4,000 rxns*

Description

The Super LongTaq Green PCR Mix contains Hotstart Taq DNA polymerase, Hotstart Phusion DNA polymerase, dNTPs, buffer, electrophoresis indicator and other PCR amplification components (except templates and primers). The fidelity is about 100 times that of Taq DNA polymerase with reasonable enzyme ratio combination. It can amplify fragments up to 50kbp. Super LongTaq Green PCR Mix is resistant to a wide range of PCR inhibitors to achieve superior PCR results even in the most demanding applications, making it a highly specific PCR Mix with excellent compatibility.

The reaction system of this product can be prepared at room temperature without an ice box. The prepared PCR reaction system can be placed at room temperature for 24 hours and the amplification efficiency remains unchanged.

Components

Component	K035-A	K035-B	K035-C
2X Super LongTaq Green PCR Mix	*1 ml*	*1 ml × 5*	*100 ml*

This product contains two electrophoresis indicators, blue and yellow, PCR amplification products can be directly electrophoretic.

Storage

Store at -20°C for 2 years.

Protocol

1. Preparation of reaction solution

Add the following reagents to the proper thermal cycler reaction tube or plate on ice or at RT:

Component	50-μl rxn	Final Conc.
2X Super LongTaq Green PCR Mix [1]	*25 μl*	*1X*
upstream primer (10 μM) [2]	*2 μl*	*0.4 μM*
downstream primer (10 μM) [2]	*2 μl*	*0.4 μM*
template DNA [3]	*1-4 μl*	*<1μg*
Water, nuclease-free	*to 50 μl*	*–*

[1] The amount of Super LongTaq Green PCR Mix can be adjusted according to the needs of the experiment. Reducing the final concentration can improve the reaction specificity, and increasing the final concentration can improve the reaction efficiency.

[2] Recommended range of final primer concentration: 0.1-1μM. The concentration can be reduced when the specificity is poor, and the concentration can be increased when the efficiency is low.

[3] The optimal dosage varies with different templates. The recommended dosage for some DNA templates is as follows (50 μl reaction system).

Template	*Human genomic DNA*	*λDNA*	*cDNA*	*Plasmid DNA*
Dosage	*1ng-500g*	*0.5ng-5ng*	*1-5μl*	*0.1ng-10ng*

2. Perform PCR using the following thermal cycling condition

Stage	Temperature	Time	Number of Cycles
Initial Denaturation	*95°C*	*2 min*	*1*
Denaturation	*95°C*	*30 sec*	*25-35*
Annealing	*55-60°C [1]*	*30 sec*	
Extension	*72°C*	*20 sec/kb*	
Final Extension	*72°C*	*5 min*	*1*

[1] The annealing temperature should be set according to primers with lower Tm values. High annealing temperature can improve the specificity, low annealing temperature can improve the low copy detection rate.

Quality Control

The absence of endodeoxyribonucleases, exodeoxyribonucl- eases and ribonucleases is confirmed by appropriate quality tests. Functionally tested in amplification of a single-copy gene from human genomic DNA.

Product Use Limitations

This product is sold exclusively for research purposes and in vitro use. Neither the product, nor any individual components, was tested for use in diagnostic applications or for drug development, nor is it suitable for administration to humans or animals. Please refer to the MSDS, available upon request.

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