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Super Fi Amplification Mix for NGS

Product Number: PCK47

Shipping and Storage

-20°C

Components

Component	PCK47	PCK47
2×Super Fi PCR Mix	600 μL	2×1.2 mL

Description

Super Fi Amplification Mix for NGS is a PCR amplification premix that combines fidelity and amplification specificity, suitable for PCR amplification of high-throughput sequencing libraries.2×Super HiFi PCR Mix is a 2×premixed system composed of High-Fidelity DNA Polymerase, dNTP, PCR stabilizers and enhancers, which has advantages such as strong amplification ability, high fidelity, and strong specificity.When performing library amplification reactions, a wide range, no preference, and high yield of library amplification can be achieved, ensuring the accuracy of sequencing results. During the operation, only primers and templates need to be added, simplifying the experimental steps, improving the experimental throughput and repeatability of the results.2×Mix has added unique protective agents, amplification enhancers, and elongation factors. The unique formula makes the entire reaction system very stable and suitable for amplification of different template libraries.

Note

1. It is recommended to use high-quality purified templates and operate according to the instructions.
2. The number of cycles for library amplification is set based on the input amount. If the number of cycles is too low, it will lead to a low concentration of outbound products, while if it is too high, there will be a preference for amplification.
3. Please perform all operations on ice, 2 × After thawing, please thoroughly mix the Super HiFi PCR Mix and store it at -20 ℃ in a timely manner after use.

Protocol

1. Library amplification reaction system

Component	Volume
2×Super Fi PCR Mix	25 μL
Index primer Mix	5 μL
Purified and recycled connector connection products	20 μL
Total	50 μL

Note: Index primer Mix selects different connector primer kits based on different platforms.

2. Reaction procedure

Step	Temperature	Time	Cycles
Pre denaturation	98℃	3min	
Denaturation	98℃	20s	3-20 (adjustable)
Annealing	60℃	20s	
Extend	72℃	30s	
Final extension	72℃	5min	

Note: The annealing temperature can be adjusted based on the Tm value of the primer.

The number of cycles required for the reaction is adjusted based on the amount of DNA input, and the specific number of cycles can be referred to in the table below.

Template DNA quantity	Number of cycles required for corresponding production	
	100ng	1μg
0.1 ng	13-15	16-19
1 ng	9-11	11-15
10 ng	6-8	9-12
100 ng	3-5	6-8
500 ng	1-3	3-5
1000 ng	1-3	2-4

Note:1)If the library quality is poor or FFPE samples are available, 1-3 cycles can be added to the recommended maximum number of cycles.

2)When sorting magnetic beads, it is recommended to amplify the library according to a high cycle number to obtain a sufficient library.

3)There are slight differences in the amplification efficiency of primers of different platforms and lengths, which can be adjusted appropriately according to needs.