

2×AMPQX® Ultra-Long PCR Master Mix-with Dye

Cat. no. LM201008-2

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Product Information

Product	2 × AMPQX® Ultra-Long PCR Master Mix-with Dye
Catalog No.	LM201008-2
Storage conditions	This product should be stored at -25~ 15 °C for 1 years.

2.Product description

2 × AMPQX® Ultra-Long PCR Master Mix (With Dye) has ligand-modified heat-stabilized Taq DNA Polymerase, fused 3' -5' -corrected activity factor and optimized buffer system, able to amplify 25 kb of genome fragments, 14 kb of cDNA gene sequence, and a 40 kb λDNA fragment. The dNTP and Mg²⁺ required for amplification are included in Mix. When used, only primers and template can be used, avoiding various losses caused by the addition process. Meanwhile, Mix also contains the dye part, which greatly reduces the tedious steps of subsequent electrophoresis. In addition, the protective agent added to the system enables the product to be maintained after repeated freezing and thawing Stable activity. PCR, the 3' end of the product, band A, can be directly ligated to the T vector.

3.Instructions

3.1.Recommended PCR reaction systems.

Components	Volume (μL)	Final concentration
ddH ₂ O	Up to 50	-
2× AMPQX® Ultra-Long PCR Master Mix-with Dye	25	1x
Template	x	-
Forward Primer 10 μmol/L	2	0.4 μM
Reverse Primer 10 μmol/L	2	0.4 μM

[Note]:Reaction buffer: The buffer contains 2.5 mM Mg²⁺ and the optimized dNTPs components. At the same time, the kit provides additional MgSO₄ and dNTPs. For fragments with difficult amplification above 20 kb, we can try to add Mg²⁺ and 200-500 μM.

Recommended usage of the different templates

Template types	Template usage
Genome DNA	50 ng - 200 ng
Plasmid DNA	100 pg - 20 ng
cDNA	1-5 µL (no more than the reaction system 1/10)

3.2.Reaction program

Cycle step	Temp.	Time	Cycles
Initial denaturation	95°C	3 min	1
Denaturation	98°C	10 sec	35
Annealing	68°C	30 sec/kb	
Final extension	72°C	10 min	1

[Note]: Annealing/extension: Expansion of the growing fragments is recommended using a two-step method. The annealing/extension time was set at 30 sec/kb to amplify most of the fragments, and to prolong the reaction appropriately for fragments above 20 kb. Time should not exceed 60 sec/kb.

4. Notes

1. For your safety and health, please wear a lab coat and disposable gloves during operation.
2. This product is for research use only!