ExpressGO™ PreMix
2X PCR Master Mix

Operation Manual

Cat.: C108100
Size: 1.25 mL (for 100 PCR reactions)
Store at -20°C upon arrival
Research Use Only

I. Description:

2X ExpressGO™ PreMix is an optimized and ready-to-use mixture containing reaction buffer, dNTPs, loading dye, glycerol, PCR enhancers and the PCR polymerase as a 2-fold concentration. Compared with conventional Taq polymerase, ExpressGO™ Taq exhibits higher fidelity and less nonspecific polymerase activity at temperatures lower than 50°C. Using 2X ExpressGO™ PreMix, "hot start PCR" can be achieved without additional reagents or procedures. Thus, 2X ExpressGO™ PreMix can easily amplify 5 kb DNA fragments from lambda DNA template with high specificity. Moreover, 2X ExpressGO™ PreMix is extremely stable. Although it is not recommended, 2X ExpressGO™ PreMix can stand for one month in 37°C storage condition while its amplification ability still maintained. Using 2X ExpressGO™ PreMix, the PCR preparation becomes easier and more efficient. Analyzing is also much more convenient now since samples can be loaded for electrophoresis directly after the PCR reaction. It is suitable for routine PCR applications with variant samples, such as purified DNA, cDNA, and bacterial colonies.

II. Applications:

1. Suitable for amplifying up to 10 kb DNA fragments
2. High throughput PCR
3. Generation of PCR products for TA cloning
4. Colony PCR

III. Storage Condition

-20°C	4°C	25°C	37°C
2 years	6 months	3 months	30 days

IV. Recommended PCR Condition:

DNA	Amount
Genomic DNA	10-200 ng
Plasmid DNA	1-10 ng
cDNA	~100 ng

Component	Volume per reaction (μL)
1-100ng DNA template	Variable
10 μM forward Primer	0.5
10 μM reverse Primer	0.5
2X ExpressGO™ PreMix	12.5
Nuclease-Free Water	To 25
Total volume	25μL

V. Thermocycling Conditions for a Routine PCR:

The recommended parameters may be optimized for each new primer-template pair for optimal specificity and amplification.

Cycles	Step	Temp.	Time
1	Initial denaturation	95°C	1-5 mins
25-35	Denaturation	95°C	30 sec
	Annealing	45-72°C	30 sec
	Extension	68/72°C	1 min/kb
1	Final Extension	72°C	5-10 mins
	Hold	14°C	--

VI. Experimental Data

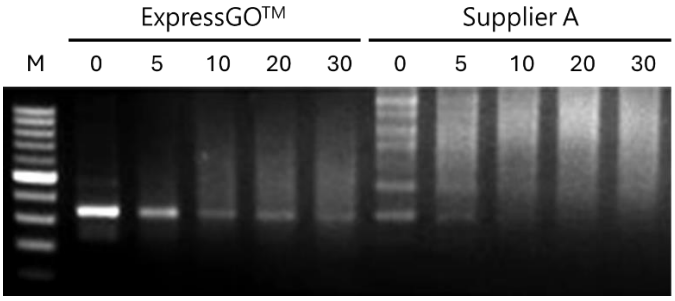

Figure 1. Comparison of the PCR amplification specificity between ExpressGO™ and other suppliers' non-hot start PCR master mix.
The reaction mixture is incubated at 25°C for 0 to 30 minutes before PCR.

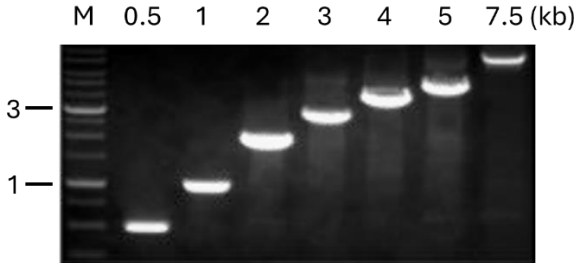

Figure 2. ExpressGO™ PCR amplification of amplicons with different sizes.

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