DirectGO™ PreMix-CE
2X PCR Master Mix

Catalog number: C108200-CE
Size: 1.25 mL (for 100 PCR reactions)
Store at -20°C

I. Description:

2X DirectGO™ PreMix-CE is a premixed ready-to-use solution containing reaction buffer, dNTPs, glycerol, PCR enhancers and Hot Start Taq DNA polymerase as 2-fold concentration. Comparing with conventional Taq polymerase, DirectGO™ Taq prevents non-specific amplification due to mispriming and/or formation of primer dimers before thermal cycling, and it also possess 2X faster elongation rate than conventional Taq. The polymerase activity is restored during the initial denaturation step when amplification reactions are heated at 94-95°C for ten minutes. In addition, 2X DirectGO™ PreMix-CE is suitable for PCR amplification directly from whole blood, and samples from cell lines or tissues. You may skip any prior DNA purification steps, only applying a tiny amount of raw material directly into the PCR reaction, running in a PCR machine, and loading into an agarose gel for electrophoresis analysis. In addition, 2X DirectGO™ PreMix-CE are supplied with specially optimized buffer that enable robust fluorescence signal for downstream capillary gel electrophoresis technology.

II. Applications:

1. Trace sample analysis
2. PCR - Karyotyping
3. Forensic examination
4. High - specificity PCR
5. High - throughput PCR

III. Storage Condition

-20℃	4℃	25℃	37℃
1.5 years	14 days	10 days	3 days

IV. Recommended PCR Condition:

Instruction of using whole blood as templates:
Heparin, EDTA or citrate treated whole blood sample is all suitable for DirectGO PreMix-CE. DNA amplification can be achieved in the present of 1 ~ 10% blood.

Note:
For whole blood direct PCR, we recommended the reaction mix should keep on ice before PCR amplification started because crude sample can result in false negative results from PCR.

Component	Amount per reaction
Raw material	X
10 µM forward Primer	0.5 µl
10 µM reverse Primer	0.5 µl
2X DirectGO™ PreMix-CE	12.5 µl
Nuclease-free water	to 25 µl
Total volume	25 µl

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	Temperature	Time
1	Initial denaturation	95°C	10 mins
25-35	Denaturation	95°C	30 s
	Annealing	Primer Tm + 3-5°C	30 s
	Extension	72°C	15-30 s/kb
1	Final Extension	72°C	5-10 mins
	Hold	14°C	--

VI. Experimental Data

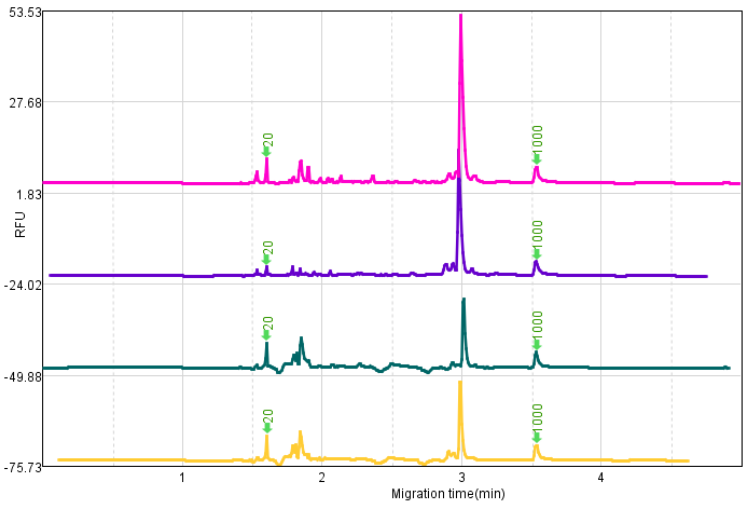

Figure 1. Comparison of PCR amplification between DirectGO™ PreMix-CE (pink / purple line) and DirectGO™ PreMix (blue / yellow line) after capillary electrophoresis analysis. (5 % blood: pink line / 10 % blood: purple line);(5 % blood: blue line / 10 % blood: yellow line). Cartridge: S1 (BiOptic). Sample injection: 4 kV, 10s. Sample Separation: 6 kV, 300s. Alignment marker: 20bp-1K (BiOptic).

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