Signalway Biotechnology

Signalway 2×*Taq* PCR MasterMix

Cat. #: PR 1701-1 (200 preps)
PR 1701-2 (400 preps)

Description:

PCR is one of most common molecular biology techniques in life science research. In order to get good results, researchers often have to optimize PCR conditions especially for those templates with high GC content or low purity, and "optimizing the condition" has became the most time-consuming and laborious step during PCR preparation! Although there are several PCR MasterMix kits existing in the market, which contain enzymes, dNTP, reaction buffer, these PCR MasterMix kits can only be used for simple amplification and are unable to cope with complicated DNA templates.

The PCR MasterMix from Signalway Biotechnology is the most "time saving and trouble free" PCR MasterMix, which contains specially formulated reagents for eliminating the procedure of optimizing PCR conditions. Plasmid, cDNA, genomic DNA, DNA crude extracts, or the DNA template with GC content of up to 75% can be easily amplified. This product meets the needs of the majority of PCR reactions. *Taq* polymerase is included in the mixture.

PCR reaction:

Component:	**Amount**
2× PCR MasterMix	25 µl
Primer Forward (10 µM)	1-5 µl
Primer Reverse (10 µM)	1-5 µl
Template: plasmid DNA	～50 ng
genomic DNA	～1000 ng
cDNA	～500 ng
raw DNA extract	～2 µl
dd H_2O	up to 50 µl

Setting up PCR machine

No. of Cycle	Step	Temperature	Time
1	1	94℃	4 minutes
35	1	94℃	45 seconds
	2	55-65℃	45 seconds
	3	72℃	1.5 minutes
1	1	72℃	5 minutes

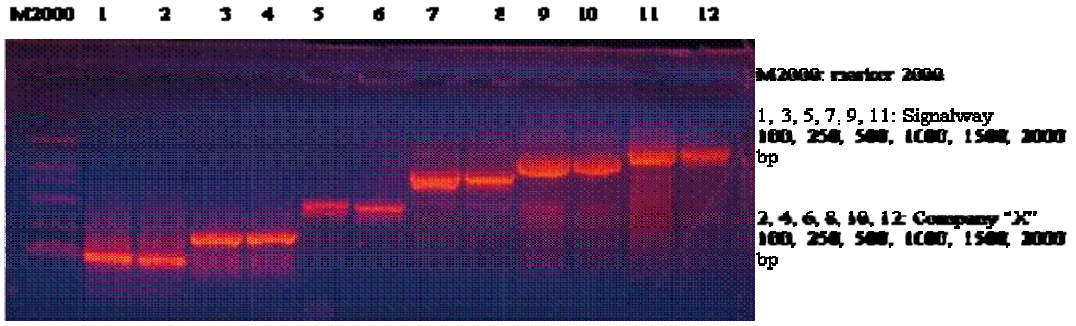
Examples

E 1. PCR using plasmids or *E.coli* culture as a template：

1．Template: plasmid

Template: pUC19 (30 ng/50 μl) or pBS (50 ng/50 μl)

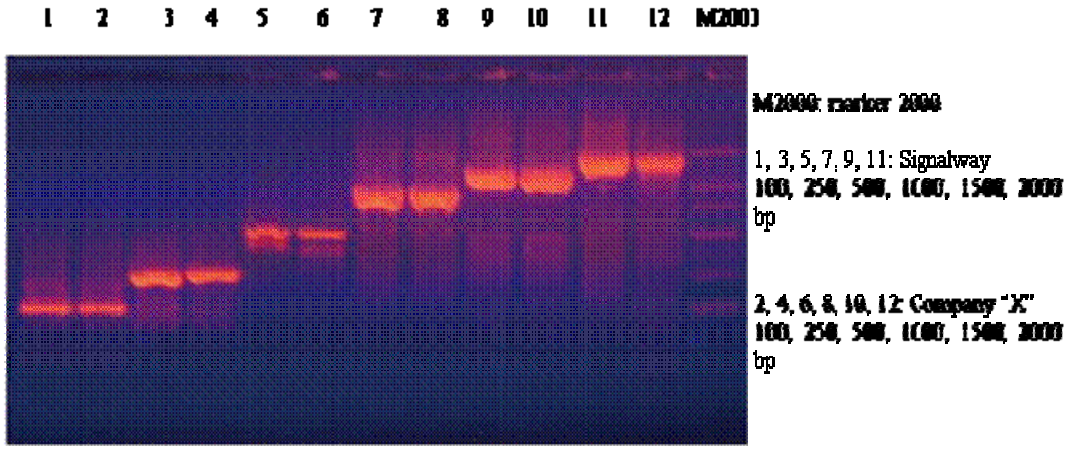
Product size: 100, 250, 500, 1000, 2000 and 1500 bp (pBS)



2．Template: *E.coli* culture

Template: *E.coli* culture containing pUC19 or pBS (OD_{600}=0.8, take 2 μl as template)

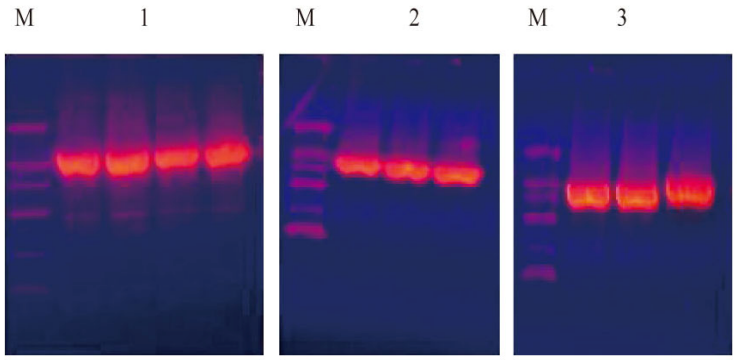
Product size: 100，250，500，750，1000 bp, and 1500 bp (pBS)。



Results: Signalway 2×Power *Taq* PCR MasterMix is suitable for amplification of DNA from plasmids and *E.coli* culture.

E2. PCR using genomic DNA as a template

1. Template: Bacterial genomic DNA (*E.coli* DNA 50 ng/50 μl)



M: M2000

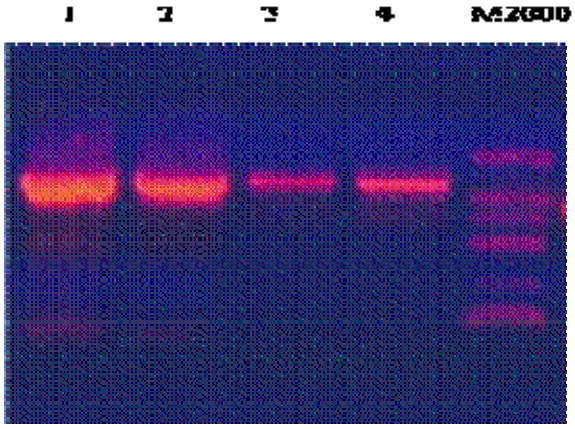
1: protease gene

2: DNase I gene

3: nuclease gene

2. Template with high GC content

a. human genomic DNA（GC%>60%, 100 ng/50 μl）

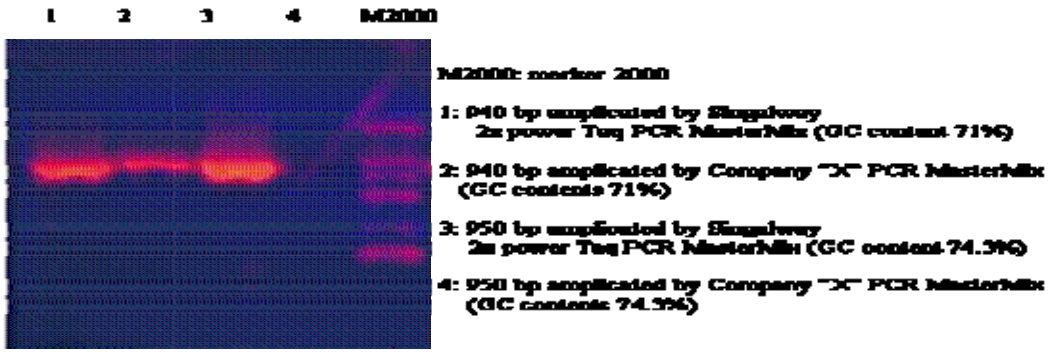


M2000: marker 2000

1, 2: human c-jun gene 255 bp amplicated by Singalway 2x power Taq PCR MasterMix (GC contents 65%)

3, 4: human c-jun gene 255 bp amplicated by Company "X" PCR Master-Mix (GC contents 65%)

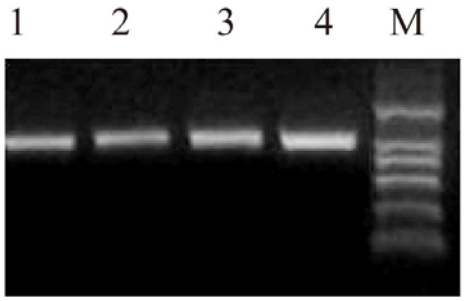
b. *Streptomyces phaeochromo* genomic DNA **(**GC content >70%, 100 ng/50 μl**)**



Results: Signalway 2×Power *Taq* PCR MasterMix is suitable for amplification of prokaryotic or eukaryotic DNA. Signalway 2×Power *Taq* PCR MasterMix has much higher amplification efficiency than a product from another vendor.

E3. PCR using cDNA as a template

Human placenta cDNA as a template



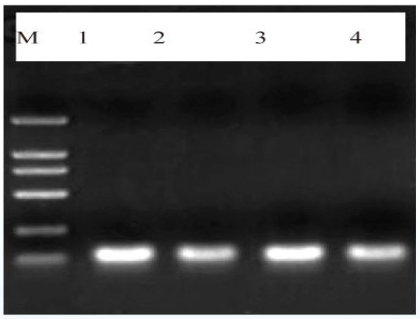
M: marker2000

1~4: 1200 bp

E4. PCR using DNA raw extract as a template

1. Human hair raw extract

Take a male hair with follicles, wash with 70% ethanol once and with distilled water; put it in a PCR tube, add 15 μl lysis buffer and incubate at 65 ℃ for 30 minutes and at 95 ℃ for 15 minutes; centrifuge the PCR tube for 1 minute, take 4 μl lysate as a template for amplification.

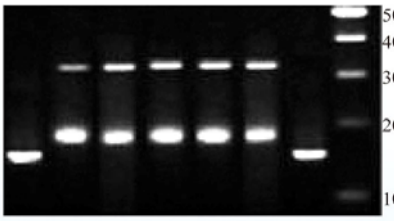


M: marker2000

1~4: 120 bp

2. Plant raw extract

Take 1-2 pieces of rice (wheat) leaves (0.5-0.7 cm) into a 1.5 ml centrifuge tube; process with Signalway's product; incubate at 95℃ for 10 minutes; add 100 μl solution I, vortex; take 4 μl directly for PCR.



Wheat 122-2A primers amplified fragment

Results: Signalway 2×Power *Taq* PCR MasterMix is suitable for amplification of DNA raw extract.