Maxime PCR PreMix Kit (*i*-Taq)

for 20μl rxn

Cat. No. INT-25025 (96 tubes)

DESCRIPTION

iNtRON's *Maxime* PCR PreMix Kit has not only various kinds of PreMix Kit according to experience purpose, but also a 2X Master mix solution.

Maxime PCR PreMix Kit (*i*-Taq) is the product what is mixed every component. *i*-Taq™ DNA Polymerase, dNTP mixture, reaction buffer, and so on- in one tube for 1 rxn PCR. This is the product that can get the best result with the most convenience system. The first reason is that it has every components for PCR, so we can do PCR just add a template DNA, primer set, and D.W.. The second reason is that it has Gel loading buffer to do electrophoresis, so we can do gel loading without any treatment. In addition, each batches are checked by a thorough Q.C., so its reappearance is high. It is suitable for various sample's experience by fast and simple using method.

STORAGE

Store at -20°C; under this condition, it is stable for at least a year.

CHARACTERISTICS

- High efficiency of the amplification
- Ready to use: only template and primers are needed
- Stable for over 1 year at -20℃
- Time-saving and cost-effective

CONTENTS

- *Maxime* PCR PreMix (*i*-Taq; for 20μl rxn) 96 (500) tubes.

Component in 20 μl reaction	
i-Taq™ DNA Polymerase(5U/μl)	2.5U
dNTPs	2.5mM each
Reaction Buffer(10x)	1x
Gel Loading buffer	1x

SUGGESTED CYCLING PARAMETERS

PCR cycle		Temp.	PCR product size		
			100-500bp	500-1000bp	1Kb-5Kb
Initial denaturation		94℃	2min	2min	2min
30-40 Cycles	Denaturation	94℃	20sec	20sec	20sec
	Annealing	50-65℃	10sec	10sec	20sec
	Extension	65-72℃	20-30sec	40-50sec	1min/Kb
Final extension		72 ℃	Optional. Normally, 2-5min		

PROTOCOL

1. Add template DNA and primers into *Maxime* PCR PreMix tubes (*i*-Taq).
   Note 1 : Recommended volume of template and primer : 3μl~5μl
   Appropriate amounts of DNA template samples
   - cDNA : 0.5-10% of first RT reaction volume
   - Plasmid DNA : 10pg-100ng
   - Genomic DNA : 0.1-1ug for single copy

   Note 2 : Appropriate amounts of primers
   - Primer : 5-20pmol/μl each (sense and anti-sense)
2. Add distilled water into the tubes to a total volume of 20μl.

Example Total 20μl reaction volume

PCR reaction mixture	Add
Template DNA	1 ~ 2μl
Primer (F : 10pmol/μl)	1μl
Primer (R : 10pmol/μl)	1μl
Distilled Water	16 ~ 17μl
Total reaction volume	20 μl

Note : This example serves as a guideline for PCR amplification. Optimal reaction conditions such as amount of template DNA and amount of primer, may vary and must be individually determined.

3. Dissolve the blue pellet by pipetting.
   Note : If the mixture lets stand at RT for 1-2min after adding water, the pellet is easily dissolved.
4. (Option) Add mineral oil.
   Note : This step is unnecessary when using a thermal cycler that employs a top heating method(general methods).
5. Perform PCR of samples.
6. Load samples on agarose gel without adding a loading-dye buffer and perform electrophoresis.

Note : The PCR process is covered by patents issued and applicable in certain countries. iNtRON Biotechnology does not encourage or support the unauthorized or unlicensed use of the PCR process. Use of this product is recommended for persons that either have a license to perform PCR or are not required to obtain a license.

Note : This CYCLING PARAMETERS serves as a guideline for PCR amplification. optimal reaction conditions such as PCR cycles, annealing temperature, extension temperature and incubation times, may vary and must be individually determined.

EXPERIMENTAL INFORMATION

- *Comparison with i-Taq™ DNA Polymerase and i-Master mix PCR PreMix*

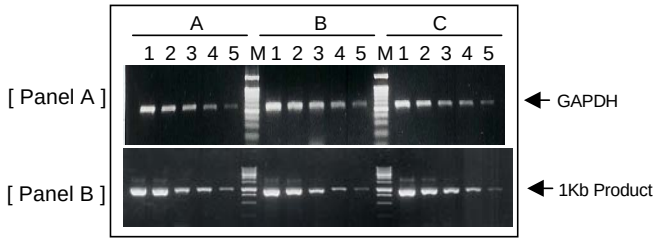

Fig.1. [Panel A] RT-PCR amplification at the Indicating cDNA diluted mixtures.
Total RNA was purified from mouse cells using easy-BLUE™ Total RNA Extraction Kit (Cat. No. 17061). And then, the first strand of cDNA was synthesized using Power cDNA Synthesis Kit (Cat. No. 25011). After diluting the cDNA mixture as indicates, the RT-PCR reaction was performed with *i-Taq*™ DNA Polymerase, *i*-Master mix PCR Kit and *Maxime* PCR PreMix (*i*-Taq).
A, *i*-Master mix PCR Kit; B, *i*-Taq™ DNA Polymerase; C, *Maxime* PCR PreMix (*i*-Taq)
Lane M, 100bp Ladder DNA Marker; lane 1, undiluted cDNA; lane 2, 1/2 diluted cDNA; lane 3, 1/4 diluted cDNA; lane 4, 1/8 diluted cDNA; lane 5, 1/16 diluted cDNA
[Panel B] PCR amplification
Comparison with *i*-Taq™ DNA Polymerase, *i*-Master mix PCR PreMix Kit and *Maxime* PCR PreMix (*i*-Taq) by amplifying 1Kb DNA fragment from variable amounts of λDNA Aliquots of 5μl in 20μl reaction are loaded on 1% agarose gel.
Lanes M, 1Kb ladder; lanes 1, 200 pg; lane 2, 20 pg; lane 3, 2 pg; lane 4, 200 fg; lane 5, 20 fg

- *Comparison with different company kit*

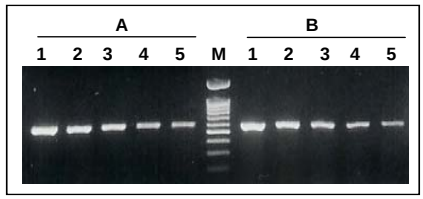

Fig.2. Comparison of *Maxime* PCR PreMix (*i*-Taq) and Company A's PreMix system by amplifying 570bp DNA fragment (GAPDH).
Total RNA was purified from SNU-1 using easy-BLUE™ Total RNA Extraction Kit (Cat. No. 17061). And then, the first strand of cDNA was synthesized using Power cDNA Synthesis Kit (Cat. No. 25011). After diluting the cDNA mixture as indicates, the RT-PCR reaction was performed.
A, Company A; B, iNtRON's *Maxime* PCR PreMix (*i*-Taq)
Lane M, 100bp Ladder DNA Marker; lane 1, undiluted cDNA; lane 2, 1/2 diluted cDNA; lane 3, 1/4 diluted cDNA; lane 4, 1/8 diluted cDNA; lane 5, 1/16 diluted cDNA