

Wise Taq Premix

9K-002-0028 (96Rx) / 9K-002-0032 (576Rx)

store at -20°C

Content

. 0.2 ml 8-strip tube attached with individual caps

Protocol

Description

Taq DNA polymerase is a thermostable DNA polymerase that possesses 5' to 3' polymerase activity. Taq DNA polymerase provides high quality and high value in terms of cost per unit and profit for amplification of <5kb general PCR as high capacity. Wise Taq premix is a preparation in 0.2m 8-strip PCR tube with Taq DNA polymerase and all needed reagents for rapid PCR reaction. Simply add Water, primers set and template.

	Reaction mixture (for 20µL reaction)	Temperature cycle		
- Routine PCR				
- Genotyping	primer 1(10pmole/µL)	1.0 µL	95°C 2 min	x1
- TA cloning	primer 2(10pmole/µL)	1.0 µL	95°C 20 sec	
- General sequencing	template <200ng	X µL	AT* 40 sec] x10~40
	dd water up to	30 µL	72°C 1 min/kb	
			72°C 5 min	x1

*AT: Annealing Temperature

(Adjust to the lower Tm between two primers)

$$AT = Tm - (4 \sim 6^\circ C)$$

$$Tm = 2^\circ C \times (A+T) + 4^\circ C \times (G+C)$$

No loading dye addition is required

It might be required to optimize PCR conditions depending on target size, Tm of primers, template nature, extension time, annealing temperature, enzyme quantity and cycle(s) numbers.

Technical Information

A. Template (temperature cycle)

- . Animal genomic DNA
 - 50-200 ng (25-35 cycles)
 - 10-50 ng (30-40 cycles)
- . Bacterial genomic DNA
 - 10-50 ng (20-25 cycles)
 - 1-5 ng (30-35 cycles)
- . Plasmid and lamda DNA
 - 1-5 ng (20-30 cycles)

B. Primer design

- Primer can be designed using a primer design software or manually.
- Avoid repeated sequence at 3' end.
- In case 3'-end is G+C rich, the end have to be A or T.
- In case 3' end is A+T rich, the end have to be G or C.
- It is recommended that Tm of the designed primers is >64°C and AT >58°C.

C. Extension time

- In general, extension should be performed at 0.5~1.0min/kb
- If the amplification for more than 3 kb, extension should be performed at 1.0~2.0 min/kb
- If the amplification for more than 5 kb, extension temperature should be assigned 68°C.

D. Comments

- Maintain the storage temperature constantly at -20°C
- If no amplification is obtained, redesign the primers