2X Taq PCR Premix

9K-002-0005 (5x1mL) / 9K-002-0039 (25mL)

store at -20℃

Protocol

2X Taq PCR Premix Solution is a mix composed of Taq DNA Polymerase and all required components for easy and simple applications of PCR. PCR reaction can be performed just by adding Template and Primers.

Reaction mixture (for 20µl reaction)	
template 1 (10pmole/µl)	10.0µL
primer 1 (10pmole/µl)	1.0µL
primer 2 (10pmole/µl)	1.0µL
template	X µL
D.W. to	20.0µL

Temperature cycle		
95℃ 2 min		x1
95℃ 20 sec	┐	
AT* 40 sec	├	x20~40
72℃ 1 min/kb	┘	
72℃ 5 min		x1

AT*: Annealing Temperature

Adjust to the lower Tm between two primers

AT = Tm-(4~6℃) Tm = 2℃x(A+T)+4℃x(G+C)

*It might be required to optimize PCR conditions depending on target size, Tm of primers, template nature, extension time, annealing temperature, enzyme quantity and cycles 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. ℃ and AT >58℃.
- It is recommended that Tm of the designed primers is >64

C. Extension time

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