

2xTaq PCR Premix

Catalog No.	Size
TP01-01	400 reactions (5x1 ml)
TP01-02	1600 reactions (20x1 ml)

Description: 2xTaq PCR Premix is a ready-to-use optimized solution containing Taq DNA polymerase, standard Taq reaction buffer, dNTPs, tracking dyes and stabilizers. It is ideally suited to routine PCR applications such as sub-cloning, colony screening and genotyping. It can amplify up to 4 kb from complex genomic DNA or up to 5 kb from lambda DNA. Blue dye migrates approximately at 4 kb, and yellow dye migrates approximately at 50 bp.

Source: Recombinant Taq DNA polymerase purified from an *E. coli* strain carrying *Thermus aquaticus* gene. Taq DNA polymerase is a thermostable DNA polymerase that possesses a 5'→3' polymerase activity and a double-strand specific 5'→3' exonuclease activity. TP01-01 contains 500 units of Taq DNA polymerase. TP01-02 contains 2000 units of Taq DNA polymerase.

Applications

- PCR
- Primer Extension
- Microarray Analysis
- High-Throughput PCR

Storage Condition

2xTaq PCR Premix should be stored at -20°C. Limited (up to 10 times) freeze-thaw does not affect PCR performance. For daily use, it's recommended to keep an aliquot at 4°C, which is stable up to 6 weeks.

Protocol

These recommendations serve as a starting point; in order to maximize amplification the reaction conditions may require optimization.

1. Thaw 2xTaq PCR Premix on ice or at room temperature then on ice, and mix well by inverting several times before use.

2. Prepare the following reaction in a thin-walled PCR tube on ice:

Component	25 µl	50 µl	Final
2xTaq PCR Premix	12.5 µl	25 µl	1x
5' Primer (10 µM)	0.5 µl	1 µl	0.2 µM
3' Primer (10 µM)	0.5 µl	1 µl	0.2 µM
DNA template	Determined by user		Plasmid DNA (0.1–1ng/ml); Genomic DNA (1–10ng/ml)
Nuclease free H ₂ O	to 25 µl	to 50 µl	

❖ For GC-rich PCR fragment:

Component	25 µl	50 µl	Final
2xTaq PCR Premix	12.5 µl	25 µl	1x
PCR Enhancer (5x)	5 µl	10 µl	1x
5' Primer (10 µM)	0.5 µl	1 µl	0.2 µM
3' Primer (10 µM)	0.5 µl	1 µl	0.2 µM
DNA template	Determined by user		0.1–10 ng/ml
Nuclease free H ₂ O	to 25 µl	to 50 µl	

3. Gently mix the reaction and spin down in microcentrifuge. If the thermocycler does not have a heated cover, add one drop of mineral oil to the reaction tube to prevent evaporation.

4. Cycling conditions for a routine PCR reaction:

Initial Denaturation	94-95°C	1-5 min
25-40 cycles	94-95°C 45-70°C 72°C	15-30 sec 10-30 sec 1 min per 1000 base pairs
Final extension	72°C	5 min
Final Soak	4°C	∞



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