EzWay™ Taq PCR MasterMix

1. Catalog No.

Cat. No	Product	Size
K0564002	EzWay™ Taq PCR MasterMix (2x)	1ml
K0564003	EzWay™ Taq PCR MasterMix (2x)	5ml (1ml x 5)

2. Storage

1 year at -20°C
(The product is able to be shipped on blue ice and should be stored immediately at -20°C.)

3. Contents

Component	Cat.No	K0564002	K0564003
2X EzWay™ Taq PCR MasterMix	K0564002	O (1.0ml)	-
	K0564003	-	O (5.0ml)
4X Magic Buffer **(Only use for High G+C content)**	K0561031	O (1.0ml)	O (5.0ml)

4. Description

The EzWay™ Taq PCR MasterMix provides robust PCR performance in a wide range of PCR applications without the need for time-consuming optimization. Only primers and template DNA are added to prepare the final PCR. The EzWay™ Taq PCR MasterMix contributes to highly reproducible PCR by reducing pipetting errors and miscalculation. The EzWay™ Taq PCR MasterMix can be stored at 2-8°C allowing even faster PCR setup by eliminating thawing time.

- Premixed solution of Taq DNA Polymerase, Taq PCR buffer, dNTPs, $MgCl_2$, dye and additives in a 1.5ml tube
- Source: E. coli, recombinant gene from Thermus aquaticus
- Amplification range:
  - Lambda DNA: up to 6Kb (Max. 12Kb)
  - Human genomic DNA: up to 2Kb (Max. 4Kb)
- Customer's optional aliquot
- A time saving preparation
- Reduced risk of handling errors and contamination
- 5'→3' exonuclease activity
- Extra A addition (terminal transferase) activity
- Easy handling and shipping due to temperature stability

5. Application

- Amplification of genomic DNA and cDNA targets up to 3kb long
- GC-rich sequences or secondary structures
- TA Cloning
- Differential Display
- Degenerate PCR

6. PCR Amplification

1. Add the following reagents to a thin-walled PCR microcentrifuge tube or plate.

Component	Final Concentration	Volume/reaction	
2x EzWay™ Taq PCR MasterMix	1X	10 µL	25 µL
5' Primer	0.1 - 0.5 uM	Variable	Variable
3' Primer	0.1 - 0.5 uM	Variable	Variable
Distilled water		Variable	Variable
Template		Variable	Variable
Total reaction volume		**20 µL**	**50 µL**

2. Mix gently.

3. When using a thermal cycler without a heated lid, add approximately 100ul of mineral oil on top of the mixture.

4. Perform thermal cycling.

Step		Temp.	Time	Cycles
Initial Denaturation		94℃	2-5 min	1
Cycling	Denaturation	94℃	0.5-1 min	25-35
	Annealing	50-68℃	0.5-1 min	
	Extension	72℃	1 min (~1kb/imin)	
Final Extension		72℃	10 min	1

Note:

a. Primers should be 15 to 30 bases in length and near 50% G+C content.

b. **Magic Buffer is not necessary for normal G+C content. It will improve DNA amplification of templates that have a high G+C content and a high degree of secondary structure.** We recommend that the volume added should not exceed 25 % (v/v) of final PCR volume.

5. The amplified DNA can be detected by various electrophoresis techniques. The most common techniques are agarose or polyacrylamide gel electrophoresis depending on the size of the amplicon.