



# BioDiamond Taq DNA polymerase 2X Master Mix Red 5ml

Cat No. DMDD005  
Pack size: 4x 1.25 ml  
Conc: 2X

## Description

2X Redy Mix is optimized mixture contain of Taq enzyme, reaction buffer, dNTP, enhancer and red dye as 2-fold concentration. 2x Redy mix is designed to allow the user for quick ,easy preparation and ready loading of reaction mixture. The 2x Redy mix can be amplification PCR products up to 3 kb and the products can be directly cloning into T-vector.

## Storage conditions

at -20°C

## Template

2 x Redy mix is suitable for amplifying targets up to 3 kb from the following templates:

Genomic DNA: 10–200 ng  
Plasmid DNA: 1–5 ng  
cDNA: ~100 ng starting total RNA

## Primers

Use 0.3 μM per primer as a general starting point. For larger amounts of template (e.g., 200 ng genomic DNA), increasing the concentration up to 0.5 μM per primer may improve yield.

## Annealing Temperature

The annealing temperature is slightly higher than with typical PCR. The optimal annealing temperature should be ~2°C lower than the T<sub>m</sub> of the primers used. A range of 58–68°C is recommended.

## Extension Time

As little as 30 seconds per kb is suitable for most targets. Use up to 60 seconds per kb for maximum yield.

## Major composition:

NH<sub>4</sub><sup>+</sup> buffer system with 3.0mM MgCl<sub>2</sub>  
Taq  
dNTP mix

## PCR Protocol:

1. Thaw the 2x Redy mix at room temperature. Vortex the 2x Redy mix and then spin it briefly in a micro centrifuge to collect the material in the bottom of the tube.
2. Prepare one of the following reaction mixes on ice:

Component	Volume
2x Redy mix	12.5 ul
Primer1 (20 pmol)	1-2 ul
Primer2 (20 pmol)	1-2 ul
template	1-10 ul
ddH <sub>2</sub> O	Up to 25 ul
Total	25 ul

3. If necessary you can scale up your volume

## 1. Program the thermal cycler as follows:

Step	Temperature	Time	Cycle
Initial denaturation	94-96oC	0.5-2mins	1
Denaturation	94-96oC	0.2-2mins	25-40
Annealing	50-68	0.2-2mins	
Extension	68-75	1min/1kb	
Final extension	68-75	1-10mins	1

## Step

After cycling, maintain the reaction at 4°C. Samples can be stored at –20°C until use.

Analyze products using standard agarose gel electrophoresis.