



**SMOBIO**

Small Bio, Smart Tool

[www.smobio.com](http://www.smobio.com)

## Product information

### ExcelTaq 5X PCR Master Mix

<b>TP1100</b>	<b>200 reactions</b>	
	5X PCR Master Mix	1 ml × 2
	6X DNA loading dye (Blue)	1 ml × 2

## Storage

4°C ≥ 6 months

-20°C ≥ 24 months

**Caution: Avoid Multiple Freeze/Thaw Cycles**

## Description

The ExcelTaq 5X PCR Master Mix is a ready-to-use mixture for amplifying targeted DNA fragments. It is designed to serve as ready-to-use master mix for virtually all PCR applications. The mixture contains all components for PCR with the exception of template and primers. This not only saves valuable time in the laboratory, but also reduces the number of pipetting and reagent handling errors. The PCR Master Mix is supplied as a 5X concentrated ready-to-use mix, that is a mixture of recombinant *Taq* DNA Polymerase, reaction buffer,  $MgCl_2$ , dNTP and enzyme stabilizer complimented with loading dye solution containing two tracking dyes (Xylene cyanol FF and Bromophenol blue) for post PCR analysis via agarose gel electrophoresis.

## **Features**

- 5'→3' DNA polymerase activity
- No detectable 3'→5' exonuclease (proofreading) activity
- Generates PCR products with 3'-dA overhangs
- High throughput PCR
- High yield PCR
- High reproducibility
- Less pipetting error

## **Applications**

- Routine PCR amplification of DNA fragments up to 8 kb
- Generation of PCR product for TA cloning
- DNA labeling
- DNA sequencing

## Recommended PCR Condition

Template	1 – 150 ng
Forward primer	0.1 – 0.5 $\mu$ M
Reverse primer	0.1 – 0.5 $\mu$ M
5 $\times$ Master Mix	10 $\mu$ l
H <sub>2</sub> O	Variable
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Total volume	50 $\mu$ l

## Recommended PCR Program

94°C	2 min	} 25 ~ 40 cycles
94°C	30 sec	
50~68°C*	30 sec	
72°C	30 sec/kb	
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72°C	1 min	

\*Optimal PCR condition varies according to primers' thermodynamic properties.

## **Quality Control**

### **Functional Testing**

ExcelTaq 5X PCR Master Mix is tested for performance in the polymerase chain reaction (PCR) in 50  $\mu$ l standard reaction condition to amplify a 794 bp gene from 10 pg of tested plasmid DNA. The resulting PCR product is visualized as a single band on an ethidium bromide-stained agarose gel.

### **Nuclease Assay**

No contaminating endonuclease or exonuclease activity was detected using pUC19 incubated with ExcelTaq 5X PCR Master Mix (1:5 dilution) for 4 hours at 37°C.

### **Residual Nucleotides Assay**

No contaminating residual nucleotides were detected from purified DNA Polymerase source by PCR assay.

## **Other Information**

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Caution: Not intended for human or animal diagnostic or therapeutic uses.

## Related Products

DM1100	ExcelBand 50 bp DNA Ladder, 500 $\mu$ l
DM2100	ExcelBand 100 bp DNA Ladder, 500 $\mu$ l
DM2300	ExcelBand 100 bp+3K DNA Ladder, 500 $\mu$ l
DM3100	ExcelBand 1 KB (0.25-10 kb) DNA Ladder, 500 $\mu$ l
DM3200	ExcelBand 1 KB Plus (0.1-10 kb) DNA Ladder, 500 $\mu$ l
DM4100	ExcelBand XL 25 kb DNA Ladder, Broad Range (up to 25 kb), 500 $\mu$ l
DL5000	FluoroDye DNA Fluorescent Loading Dye (Green, 6 $\times$ ), 1ml
DS1000	FluoroStain DNA Fluorescent Staining Dye (Green, 10,000 $\times$ ), 500 $\mu$ l
TF1000	ExcelTaq SMO-HiFi DNA Polymerase, 5 U/ $\mu$ l, 500 U $\times$ 1
TP1000	ExcelTaq DNA Polymerase, 500 U $\times$ 1
TP1200	ExcelTaq 5 $\times$ PCR Master Dye Mix, 200 RXN
TP1260	ExcelTaq 5 $\times$ Fluorescent PCR Master Mix Kit, 200 RXN
TP2000	ExcelTaq Blood Direct DNA Polymerase, 5 U/ $\mu$ l, 500 U $\times$ 1
TP2100	ExcelTaq Blood Direct PCR Master Mix Kit, 200 RXN
VE0100	B-BOX <sup>TM</sup> Blue Light LED epi-illuminator, AC 100-240V, 50/60Hz



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