SMOBIO®
Small Bio, Smart Tool

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## Product Information

ExcelTaq™ series

# 2X PCR Master Mix ($MgSO_4$)

**TP1120 100 RXN**

| | |
|---|---|
| 2X PCR Master Mix ($MgSO_4$) | 1.25 ml x 2 |
| 6X DNA Loading Dye (Blue) | 1 ml |

## Storage

4°C for 6 months
-20°C for 24 months

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

## Description

The ExcelTaq™ 2X PCR Master Mix ($MgSO_4$) 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 ($MgSO_4$) is supplied as a 2X concentrated ready-to-use mix, that is a mixture of recombinant *Taq* DNA polymerase, reaction buffer, $MgSO_4$, dNTP and enzyme stabilizer enabling efficient amplification of template in PCR and allows the user to prepare a PCR reagent conveniently. This product is supplied with 6X DNA Loading Dye (Blue) containing two tracking dyes (Xylene cyanol FF and Bromophenol blue) for post PCR analysis through the use of agarose gel electrophoresis.

## Features

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

## Applications

- Routine PCR
- Colony PCR
- High throughput PCR
- Amplification of DNA fragments up to 8 kb
- Generation of PCR products for TA cloning
- DNA labeling

## Recommended PCR Condition

| | |
|---|---|
| Template | 1 – 150 ng |
| Forward primer | 0.1 – 0.5 µM |
| Reverse primer | 0.1 – 0.5 µM |
| 2X PCR Master Mix ($MgSO_4$) | 25 µl |
| $ddH_2O$ | to 50 µl |
| Total volume | 50 µl |

## Recommended PCR Program

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

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

## Quality Control

### Functional Testing

ExcelTaq™ 2X PCR Master Mix ($MgSO_4$) is tested for performance in the polymerase chain reaction (PCR) in a 50 µl standard reaction condition to amplify a 665 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™ 2X PCR Master Mix ($MgSO_4$) (1:1 dilution) for 4 hours at 37°C.

### Residual Nucleotides Assay

No contaminating residual nucleotides were detected from ExcelTaq™ 2X PCR Master Mix ($MgSO_4$) by PCR assay.

## Other Information

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

## Related Products

| | |
|---|---|
| CK1000 | Champion E. coli Transformation Kit |
| CV1100 | GetClone PCR Cloning Vector II, 20 RXN |
| DM1100 | ExcelBand 50 bp DNA Ladder, 500 µl |
| DM2100 | ExcelBand 100 bp DNA Ladder, 500 µl |
| DM2300 | ExcelBand 100 bp+3K DNA Ladder, 500 µl |
| DM3100 | ExcelBand 1 KB (0.25-10 kb) DNA Ladder, 500 µl |
| NS1000 | FluoroVue Nucleic Acid Gel Stain (10,000X), 500 µl |
| RP1000 | ExcelRT Reverse Transcriptase, 20,000 U |
| TF1000 | SMO-HiFi DNA Polymerase, 100 U |
| TF3000 | G-HiFi DNA Polymerase, 100 U |
| TP1000 | ExcelTaq DNA Polymerase, 500 U |
| TP1260 | ExcelTaq 5× Fluorescent PCR Master Mix, 200 RXN |
| TP2100 | ExcelTaq Blood Direct PCR Master Mix Kit, 200 RXN |
| TP5000 | ExcelTaq Hot Start II DNA Polymerase, 500 U |
| TQ1110 | ExcelTaq 2× Q-PCR Master Mix (SYBR, ROX), 200 RXN |
| VE0100 | B-BOX Blue Light LED epi-illuminator, AC 100-240V, 50/60Hz |


# B-BOX™ Blue Light LED epi-illuminator

The latest version of the manual can be downloaded from www.smobio.com/shop.

For research use only

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