



**SMOBIO**

Small Bio, Smart Tool

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## Product information

ExcelTaq™ serial

### 5X Blood Direct PCR Master Mix Kit

<b>TP2100</b>	<b>200 reactions</b> 5X Blood Direct PCR Master Mix Kit, 1ml × 2 Positive Control Primer Mix (10 μM each), 25 μl
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## Storage

4°C	≥ 6 months
-20°C	≥ 24 months

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

## **Description**

The ExcelTaq™ 5× Blood Direct PCR Master Mix Kit is designed for amplifying target DNA directly from whole blood, eliminating the need for a lengthy DNA isolation process.

The ExcelTaq™ 5× Blood Direct PCR Master Mix Kit contains a unique blend of 5× concentrated mixture of all essential components of a PCR reaction other than primers and templates. This master mix also contains a loading dye solution and Orange G tracking dye for convenient post-PCR gel electrophoresis analysis.

The ExcelTaq™ 5X Blood Direct PCR Master Mix Kit is highly tolerant in the presence of PCR interfering/inhibiting substances from blood (Fig. 1), and is ideal for high throughput screening of blood samples for high reproducibility.

The ExcelTaq™ 5X Blood Direct PCR Master Mix Kit includes a pair of positive control primers (CCR5) that are compatible with primate blood samples.

## 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, with reduced pipetting errors
- Compatible with most anticoagulants

## Applications

- Direct amplification of DNA from blood sample
- High throughput screening without DNA purification

## CCR5 Control Primers:

CCR5-F: 5'-CTCCCAGGAATCATCTTTACC-3'

CCR5-R: 5'-TCATTTGACACCGAAGCAG-3'

## Recommended PCR Condition

Blood	3 $\mu$ l
Forward primer	0.1 – 0.5 $\mu$ M
Reverse primer	0.1 – 0.5 $\mu$ M
5X Master Mix Kit	10 $\mu$ l
Add ddH <sub>2</sub> O to	to 50 $\mu$ l
Total volume	50 $\mu$ l

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*Note: Mix well before PCR Reaction*

## Recommended PCR Program

94°C	3 min	} 30 ~ 40 cycles
94°C	30 sec	
50~68°C*	30 sec	
72°C	1 min/kb	
72°C	3 min	

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

## Post amplification analysis

After PCR amplification, the PCR reaction mixture should be centrifuged at  $1000 \times g$  for 1 ~ 3 minutes. **Load only the clear supernatant of the PCR products for gel electrophoresis analysis.**

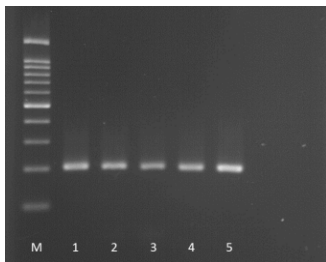


Fig. 1. The ExcelTaq™ 5× Blood Direct PCR Master Mix Kit amplified 200 bp from differently treated blood samples using CCR5 specific primers. M: DM2100 marker, lane 1: fresh blood, lane 2: blood + citrate, lane 3: blood + EDTA, lane 4: blood + EDTA/Fluoride, lane 5: blood + Heparin.

## **Quality Control**

### **Functional Testing**

ExcelTaq™ 5× Blood Direct PCR Master Mix Kit is tested for performance in the polymerase chain reaction by (PCR) using a 200 bp target from the CCR5 genomic 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 5X Blood Direct PCR Master Mix Kit (1:5 dilution) for 4 hours at 37°C.

### **Residual Nucleotides Assay**

No contaminating residual nucleotides were detected from a purified DNA polymerase source by a 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 0  $\mu$ 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 $\times$ ), 1 ml
- NS1000 FluoroVue Nucleic Acid Gel Stain (10,000X), 500  $\mu$ l
- TF1000 ExcelTaq SMO-HiFi DNA Polymerase, 1 U/  $\mu$ l, 100 U  $\times$  1
- TP1200 ExcelTaq 5 $\times$  PCR Master Dye Mix, 200 RXN
- TP1260 ExcelTaq 5 $\times$  Fluorescent PCR Master Mix, 200 RXN
- TP2000 ExcelTaq Blood Direct DNA Polymerase, 5 U/  $\mu$ l, 500 U  $\times$  1
- TQ1110 ExcelTaq 2 $\times$  Q-PCR Master Mix (SYBR, ROX), 200 RXN
- RP1100 ExcelRT One-step RT-PCR Kit, 50 RXN

For research use only

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