



SMOBio[®]

Small Bio, Smart Tool

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Product information

ExcelTaq™ series

5X Blood Direct PCR Master Mix Kit

TP2100 200 RXN

5X Blood Direct PCR Master Mix 1 ml × 2

Positive Control Primers (10 μM, each) 25 μl

Storage

4°C for 6 months

-20°C for 24 months

Caution: Avoid Multiple Freeze/Thaw Cycles

Description

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

The ExcelTaq™ Blood Direct PCR Master Mix Kit is a unique blend of 5X concentrated mixture containing all the essential components of a PCR reaction. The ExcelTaq™ Blood Direct PCR Master Mix Kit also contains the PCR-friendly loading and tracking dye solution Orange G. The inclusion of Orange G tracking dye allows for a more convenient post-PCR gel electrophoresis analysis.

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

The ExcelTaq™ 5X Blood Direct DNA 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 samples
- High throughput screening without DNA purification
- Suitable for multiplex PCR

CCR5 control primer sequence

CCR5-F: 5'-CTCCCAGGAATCATCTTTACC-3'

CCR5-R: 5'-TCATTTCGACACCGAAGCAG-3'

Recommended PCR Condition

Blood	3 μ l
Forward primer	0.1 – 0.5 μ M
Reverse primer	0.1 – 0.5 μ M
5X Blood Direct PCR Master Mix	10 μ l
Add ddH ₂ O to	to 50 μ l
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Total volume	50 μ l

Note: Mix well before PCR Reaction

Recommended PCR Program

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

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

Post amplification analysis

Centrifuge PCR reaction mixture at $1000 \times g$ for 1 ~ 3 minutes. **Load only the clear supernatant of the PCR products for gel electrophoresis analysis.**

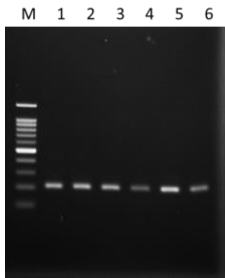


Fig. 1. The ExcelTaq™ 5X Blood Direct PCR Master Mix Kit amplified 200 bp from differently treated blood samples using CCR5 specific primers. M: DM2100 marker, lane 1: fresh blood, lane 2: blood + citrate, lane 3: blood + EDTA, lane 4: blood + EDTA/ Fluoride, lane 5: blood + Heparin, lane 6: 1 mm² of dry blood on filter paper.

Quality Control

Functional Testing

ExcelTaq™ 5X 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 ExcelTaq™ 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 ExcelTaq™ 5X Blood Direct PCR Master Mix Kit 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, 500 μ l
DM2300	ExcelBand 100 bp+3K DNA Ladder, 500 μ l
DM3100	ExcelBand 1 KB (0.25-10 kb) DNA Ladder, 500 μ l
DM4100	ExcelBand XL 25 kb DNA Ladder, Broad Range (up to 25 kb), 500 μ l
NS1000	FluoroVue Nucleic Acid Gel Stain (10,000X), 500 μ l
TF1000	SMO-HiFi DNA Polymerase, 100 U
TP1000	ExcelTaq DNA Polymerase, 500 U
TP1200	ExcelTaq 5 \times PCR Master Dye Mix, 200 RXN
TP1260	ExcelTaq 5 \times Fluorescent PCR Master Mix, 200 RXN
TP5000	ExcelTaq Hot Start II DNA Polymerase, 500 U
RP1000	ExcelRT Reverse Transcriptase, 20,000 U
RP1100	ExcelRT One-step RT-PCR Kit, 50 RXN
CK1000	Champion E. coli Transformation Kit
VE0100	B-BOX Blue Light LED epi-illuminator, AC 100-240V, 50/60Hz

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