



SMOBIO

Small Bio, Smart Tool

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Product information

ExcelTaq™ serial

Blood Direct DNA Polymerase

TP2000

400 reactions

Blood Direct DNA Polymerase 100 μ l

5X Blood Direct Buffer 1 ml \times 4

Positive Control Primer Mix 50 μ l

(10 μ M each)

Storage

4°C \geq 6 months

-20°C \geq 24 months

Description

SMOBiO's ExcelTaq™ Blood Direct DNA Polymerase is designed for amplifying target DNA directly from whole blood, eliminating the need for a lengthy DNA isolation process.

The ExcelTaq™ Blood Direct DNA Polymerase is capable of high tolerance in the presence of PCR interfering/inhibiting substances from blood (Fig. 1). The ExcelTaq™ Blood Direct DNA Polymerase is ideal for high throughput screening of blood samples aimed at high reproducibility.

The ExcelTaq™ Blood Direct DNA Polymerase 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
- Compatible with most anticoagulants

Applications

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

CCR5 Control Primers:

CCR5-F: 5'-CTCCCAGGAATCATCTTTACC-3'

CCR5-R: 5'-TCATTTGACACCGAAGCAG-3'

Recommended PCR Condition

Blood	3 μ l
Forward primer	0.1 – 0.5 μ M
Reverse primer	0.1 – 0.5 μ M
10X Blood Direct buffer	5 μ l
dNTPs	0.2 mM (each)
Blood Direct DNA Polymerase	0.25 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
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.**

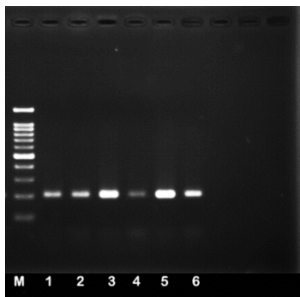


Fig. 1. The ExcelTaq™ Blood Direct DNA Polymerase amplified 200 bp from separately treated blood samples using CCR5 specific primers. M: DM2100 marker, lane 1: fresh blood, lane 2: blood + citrate, lane 3: blood + EDTA, lane 4: blood + EDTA/ Fluoride, lane 5: blood + Heparin, lane 6: 1 mm² of dry blood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

Quality Control

Functional Testing

ExcelTaq™ Blood Direct DNA Polymerase is tested for performance in the polymerase chain reaction (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 DNA Polymerase source 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

SMOBIO Technology, Inc. claims all warranties with respect to this document, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. In no event shall SMOBIO Technology, Inc. be liable, whether in contract, tort, warranty, or under any statute or any other basis for special, incidental, indirect, punitive, multiple or consequential damages in connection with or arising from this document, including but not limited to the use thereof.

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

Related Products

- DM1100 ExcelBand 50 bp DNA Ladder, 500 μ l
- DM2100 ExcelBand 100 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
- DM3200 ExcelBand 1 KB Plus (0.1-10 kb) DNA Ladder, 500 μ l
- DM4100 ExcelBand XL 25 kb DNA Ladder, Broad Range (up to 25 kb), 500 μ l
- DL5000 FluoroDye DNA Fluorescent Loading Dye (Green, 6 \times), 1 ml
- NS1000 FluoroVue Nucleic Acid Gel Stain (10,000X), 500 μ l
- TF1000 ExcelTaq SMO-HiFi DNA Polymerase, 1 U/ μ 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
- TP2100 ExcelTaq Blood Direct PCR Master Mix Kit, 200 RXN
- 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

2015 ver. 1.4.0