

# **AMPQX® Blood Advanced Direct PCR Kit**

---

**Cat. no. LM201010-1**

**Address:** SHT technology GmbH, Niederhöchstädter Str. 64, 61476 Kronberg im  
Taunus, Germany

**Tel.:** +49 176 34989414

**Website:** <https://sht-medino.de/>

# AMPQX® Blood Advanced Direct PCR Kit

Cat. no. LM201010-1

## Product Information

|                           |                                                      |
|---------------------------|------------------------------------------------------|
| <b>Product</b>            | AMPQX® Blood Advanced Direct PCR Kit                 |
| <b>Catalog No.</b>        | LM201010-1                                           |
| <b>Storage conditions</b> | This product should be stored at -20 °C for 1 years. |
| <b>Size</b>               | 250 µL/1 mL/5×1 mL                                   |

## 2.Product description

AMPQX® Blood Advanced Direct PCR Kit is a kit for direct PCR amplification of whole blood samples without DNA purification or sample pretreatment, compatible with fresh blood containing EDTA, heparin, citrate and other conventional anticoagulant, refrigerated (frozen) blood, and commercial dry blood stains for Whatman903® and FTA®. Kit containing DNA Polymerase combinations genetically engineered, With its high fidelity and strong tolerance to PCR inhibitors, 2× AMPQX® Blood Advanced PCR Buffer addition of strong elongation factor, amplification enhancement factor and optimized buffer system, Ability efficient amplification of 8 kb genomic fragments under rapid extension conditions, For fragments below 2 kb, Set the 3-5 sec/kb extension time to complete the amplification, Thus greatly shorten the identification of blood samples and testing time. The 3' end of the AMPQX® Advanced High-Fidelity DNA Polymerase Mix is flat and suitable for one-step rapid cloning and TOPO cloning kit. The primer premix Positive control primer mix (10 µM each) provided in the kit amplified a 237 bp fragment from the conserved sequence upstream of the sox21 gene in mammals and most vertebrates and can be used as a positive control.

## 3.Instructions

### 3.1.Recommended PCR reaction systems.

| Components                              | Volume (µL) | Final concentration |
|-----------------------------------------|-------------|---------------------|
| 2× AMPQX® Blood Advanced Direct PCR Kit | 25          | -                   |
| Template                                | x           | -                   |
| Forward Primer 10 µmol/L                | 2           | -                   |
| Reverse Primer 10 µ mol/L               | 2           | -                   |
| ddH <sub>2</sub> O                      | Up to 50    | -                   |

|                                   |   |  |
|-----------------------------------|---|--|
| AMPQX® Advanced High-Fidelity DNA | 1 |  |
| Polymerase Mix                    |   |  |
| Blood samples                     | X |  |

**[Note]:**

- Please mix each components before use.
- The recommended final concentration of each primer is 0.4μM, which leads to non-specific amplification.
- The optimal whole blood template concentration ranged from 0.5%to 20%, and the recommended use was 10% as the initial attempt condition, namely 5μL whole blood was added to the 50μL reaction system, with attention to avoid absorbing blood clot. For the dry blood stains stored on the Whatman®filter paper card, about 1 mm 2 of round paper pieces with blood stains should be recommended, which can be amplified directly into the PCR reaction solution without pretreatment

### 3.2.Reaction program

| Cycle step           | Temp. | Time        | Cycles |
|----------------------|-------|-------------|--------|
| Initial denaturation | 95°C  | 5 sec       | 1      |
| Denaturation         | 95°C  | 15 sec      | 30-35  |
| Annealing            | 60°C  | 15 sec      |        |
| Extension            | 72°C  | 3-10 sec/kb |        |
| Final extension      | 72°C  | 5 min       | 1      |

**[Note]:**

- The annealing temperature is the universal T<sub>m</sub> or 1 – 2°C below the primer T<sub>m</sub>. If the amplification product is less specific, an annealing temperature gradient can be established to find the optimal annealing conditions.
- The extension time of 10 sec/kb can amplify most of the target fragments below 8 kb, and most of them below 2 kb at 3-5 sec/kb. If the amplification efficiency is low, the time can be appropriately extended to 20-30 sec/kb, and should not exceed 60 sec/kb.

## 4. Notes

- For your safety and health, please wear a lab coat and disposable gloves during operation.
- This product is for research use only!
- It is recommended that blood template use is 10%of the total reaction volume,that is,to add 5μL whole blood as a template in the 50μL reaction system,and pay attention to avoid absorbing blood clot.
- The extension time of 10 sec/kb can amplify most of the target fragments below 8 kb,and most of them below 2 kb at 3-5 sec/kb. If the amplification efficiency is low,the time can be appropriately extended to 30 sec/kb.
- After the PCR reaction,it is recommended to centrifuge the reaction product at 4000 rpm(1000 g) for 1-3 min to precipitate blood cell debris, and take the supernatant for downstream analysis.