



# SUREDIRECT BLOOD PCR KIT

## INHIBITOR RESISTANT AMPLIFICATION OF PCR TARGETS IN BLOOD WITHOUT DNA EXTRACTION



### Benefits

#### No more DNA extraction

- Eliminate DNA yield loss, save on sample input, time, and resources with a streamlined workflow.

#### Superb Inhibitor Resistance

- Provides consistent, robust and reliable performance in the presence of commonly-used anticoagulants

#### Versatile Sample Type Performance

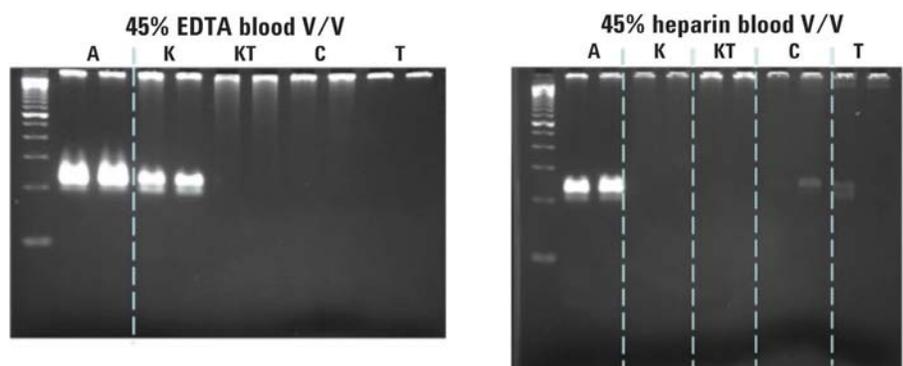
- Amplify directly from blood sample types including liquid, frozen, serum, plasma, dried on filter paper

### Overview

When working with blood samples, researchers face the added challenge of PCR inhibition. Blood samples typically contain multiple inhibitors of PCR – the heme molecule within hemoglobin as well as commonly used anticoagulants such as EDTA and Heparin. Typical blood PCR workflows include time-consuming DNA extraction steps to isolate DNA away from inhibitors. While DNA extraction can be effective, it typically causes a loss of precious sample and introduces the potential for human error and sample mix up or cross-sample contamination.

SureDirect Blood PCR Kit enables direct DNA amplification from blood and blood derivatives, streamlining your workflow by eliminating the cumbersome DNA extraction step. This kit features a newly engineered mutant Taq capable of overcoming the most common PCR inhibitors found in blood samples (see Figure 1). With direct amplification from blood, SureDirect Blood PCR Kit eliminates the most laborious and time-consuming DNA extraction process, for accelerated workflows and reduced risk of cross-contamination.

#### SureDirect Blood PCR Kit offers High Level of Inhibitor Resistance



**Figure 1.** SureDirect Blood PCR kit offers a high level of resistance to blood EDTA and heparin PCR inhibitors compared to competitive direct from blood competitor products.





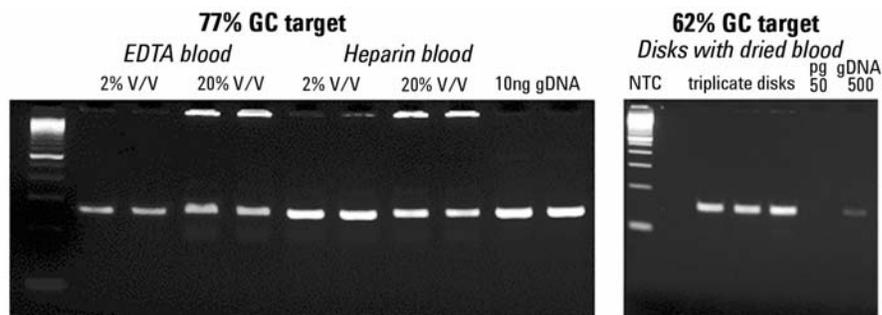
## Amplify even the most challenging targets

As an extension of Agilent's portfolio of robust, high fidelity and long range DNA polymerases, SureDirect Blood PCR Kit consistently amplifies long amplicons (2.6 kb), high GC templates (77%) (see Figure 2), and is capable of multiplexing up to 3 targets in the presence of blood (see Figure 3), EDTA and Heparin. The versatile master mix can be used for direct PCR amplification from fresh liquid and frozen blood, dried blood on filter paper, serum, and plasma. Performance has been verified on blood samples from human, dog, cat, rat, mouse, and pig.

## Overcome PCR inhibition

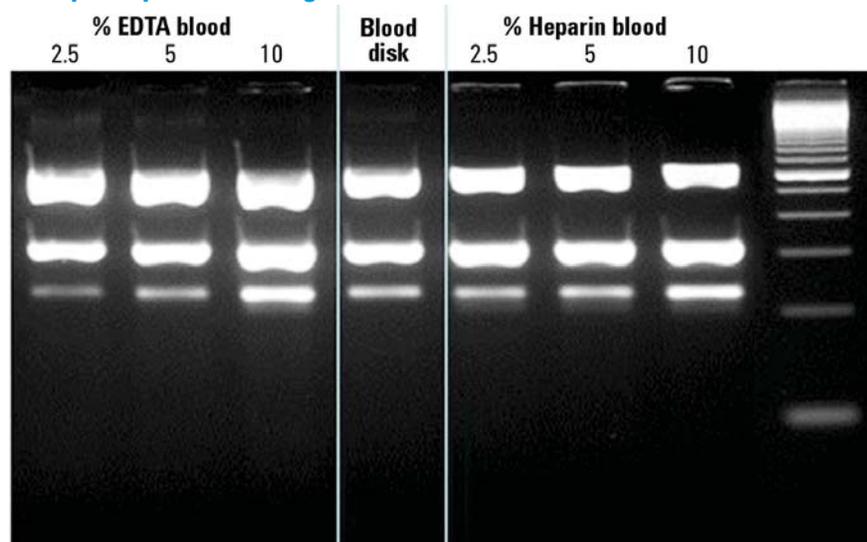
SureDirect Blood PCR Kit offers the highest degree of inhibitor resistance (see Figure 1) which enables applications that require larger amounts of blood or blood derivative sample. Due to this level of inhibitor resistance, researchers can amplify their target sequences from samples containing nearly twice as much blood as with other direct from blood amplification products without sign of inhibition, increasing the overall sensitivity of their assay. SureDirect Blood PCR Kit can offer researchers with various applications a robust and versatile solution.

### Robust amplification of GC-Rich Targets



**Figure 2.** SureDirect Blood PCR kit consistently amplified a 77% GC IGFBR target (251 bp) from liquid blood samples including EDTA and Heparin [left]. Triplicate runs of a 62% GC MN target (160bp) amplified from a dried blood disk demonstrates sample type versatility of the novel polymerase [right].

### Multiplex up to Three Targets



**Figure 3.** EDTA and heparin blood samples at concentrations of 2.5, 5, and 10%, along with a dried blood disk samples were used for the multiplex amplification of FUCO (621 bp), IGF (322 bp), and Quantos (232 bp) targets. SureDirect Blood PCR kit produced minimal non-specific amplification while consistently amplifying all three targets

### Ordering Information

Description	QTY	Rxn	Product Number
SureDirect Blood PCR Kit	1	100	600920
SureDirect Blood PCR Kit (5 pack)	5x100	500	600930

For more info: [www.agilent.com/genomics/SureDirect](http://www.agilent.com/genomics/SureDirect)



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