Product Manual

Product Name	Blood Direct PCR Kit
Catalog Number	CSB-DKT068
Physical Form	Liquid
Storage Conditions	-20 ±5°C, avoid repeated freeze-thaw cycles; can be stored at 2~8°C in the dark for frequent use.
Shipping Condition	≤0°C; dry ice transportation
Product Composition	Buffer system, dNTPs, HemoTaq DNA Polymerase
Quality Control	All components have been tested and found to have no nucleases, endonucleases, or RNase residues
Shelf Life	12 months

Product Description:

The Blood Direct PCR Kit is a reagent kit that can directly amplify PCR from whole blood samples without the need for DNA purification or sample pre-treatment. It is compatible with fresh blood, refrigerated (frozen) blood, and commonly used commercial dried blood cards containing conventional anticoagulants such as EDTA, heparin, and citrate. The kit contains genetically engineered DNA polymerase and optimized buffer system, which can amplify up to 30% of the total blood concentration. It has high fidelity and strong tolerance to PCR inhibitors, and can amplify genome fragments up to 6kb from whole blood.

Product Components:

Component No.	Component Name	Specification (50T)	Specification (100T)	Specification (500T)
1	2*Blood Direct PCR Mix	0.75mL	1.5mL	5*1.5mL
2	Blood Direct Taq Mix	50μL	100μL	500μL

3	Loading buffer	150μL	300μL	1.5mL

Operation Instructions:

Recommended reaction system

Component	Addition
ddH2O	Up to 30 μL
2*Blood Direct PCR Mix	15 μL
Blood Direct Taq Mix	1μL
Stream Primer(10μM)	1μL
Downstream Primer(10μM)	1μL
Blood Sample	0.5-5μL

[Note]: a. Primer concentration: Generally, a primer final concentration of 0.2uM in the reaction system can achieve better results. When the reaction performance is poor, the primer concentration can be adjusted within the range of 0.1uM-1.0uM.

b. Template concentration: The optimal whole blood template concentration range is 0.5%-20%, and the recommended amount is 5% as the initial trial condition. That is, add 1.5μL of whole blood to 30μL reaction system as a template, and avoid taking blood clots.

Recommended PCR reaction program:

Temperature	Time	Cycles
95°C	5 min	1
95°C	10 sec	25-35
(TM-5)°C	20 sec	
72°C	15–30 sec/kb	

72°C	5 -10 min	1

[Note]: c. Annealing temperature and time: The annealing temperature needs to be adjusted according to the Tm value of the primer, and the annealing time can be adjusted within 10-30 sec.

d. Loading buffer can be added separately before electrophoresis. After the reaction is completed, open the tube cover, add 3μL of loading buffer to the 30μL system, and directly sample for electrophoresis.