

## Product Manual

<b>Product Name</b>	Hemo Taq DNA Polymerase (Blood-resistant)
<b>Source</b>	Recombinantly expressed in Escherichia coli
<b>Catalog Number</b>	CSB-DEM044
<b>Physical Form</b>	Liquid
<b>Enzyme Activity</b>	5U/ $\mu$ L
<b>Storage Conditions</b>	-20 $\pm$ 5 $^{\circ}$ C
<b>Storage Buffer</b>	10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5% Tween 20, 0.5% NP-40, 50% Glycerol
<b>Activity Definition</b>	The amount of enzyme required to incorporate 10 nmol of deoxynucleotide into acid-insoluble material in 30 minutes at 75 $^{\circ}$ C is defined as 1 unit (U).
<b>Quality Control</b>	No detectable exonuclease and endonuclease activities
<b>Shelf Life</b>	24 months

### Product Description

HemoTaq DNA Polymerase (Blood-resistant) is a sensitive and heat-resistant Taq DNA polymerase that has been upgraded and recombinantly expressed. It is modified using an antibody method and possesses both 5'-3' polymerase activity and 5'-3' exonuclease activity. With an optimized buffer system, it exhibits strong tolerance to impurities, especially for direct amplification of blood samples, demonstrating excellent performance.

### Product components

Component No.	Component Name	Specifications		
1	5 $\times$ Hemo buffer	1.2mL	6mL	12mL

#### WUHAN HUAMEI BIOTECH CO.,LTD

2	Hemo Taq DNA Polymerase	500U	2500U	5000U
---	-------------------------	------	-------	-------

### Operating instructions

#### Recommended Reaction System

Composition	Addition amount
ddH <sub>2</sub> O	Up to 30 $\mu$ L
5 $\times$ Hemo buffer	6 $\mu$ L
10 mM dNTPs	0.6 $\mu$ L
Upstream primer (10 $\mu$ M)	0.6 $\mu$ L
Downstream primer (10 $\mu$ M)	0.6 $\mu$ L
HemoTaq DNA Polymerase	0.3 $\mu$ L
Blood template	0.5-5 $\mu$ L

#### Note:

##### A.Primer Concentration:

Generally, a primer final concentration of 0.2  $\mu$ M in the reaction system yields good results. If the reaction performance is poor, adjust the primer concentration within the range of 0.1  $\mu$ M to 1.0  $\mu$ M.

##### B.Template Concentration:

The optimal concentration range for whole blood templates is 0.5%-20%. A recomm-

ended amount of 5% is suggested as an initial trial condition, which is adding 1.5μL

of whole blood as a template in a 30μL reaction system. Be cautious to avoid drawing blood clots.

**C.Polymerase Concentration:**

It is recommended to use 0.05U/μL. The enzyme amount can be adjusted between 0.25 - 1uL. Generally, increasing the enzyme amount can enhance the amplification yield, but it may lead to a decrease in specificity.

**D.Quantitative PCR with fluorescence:**

When using this product for quantitative PCR with fluorescence, add 0.3 μL of 10μM TaqMan Probe in the recommended system mentioned above.

**Recommended PCR reaction procedure**

Temperature	Time	Cycles
95°C	5 min	1
95°C	10 s	30-35
45-68°C	30 s	
72°C	1 kb/min	
72°C	5min	1

**Note:**

**E.Quantitative PCR Program with fluorescence (TaqMan Probe method):**

95°C for 5 min; 95°C for 10s, 60°C for 30s \*, 40-45 cycles.

**F.Annealing temperature and time:**

The annealing temperature should be adjusted based on the  $T_m$  value of the primers,  
and the annealing time can be adjusted within 10-30 seconds.