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Taq Antibody

Cat. No. : CW2676S (500 U)
CW2676M (2500 U)

Shipping and Storage: -20°C. Store at 2-8°C for frequent use.

Components

Component	CW2676S 500 U	CW2676M 2500 U
Taq Antibody (5 U/μL)	100 μL	5×100 μL

Principle

Taq Antibody is a mouse monoclonal Antibody against Taq DNA Polymerase and applies to Hot Start PCR. When combined with the Taq DNA Polymerase, Taq Antibody inhibits DNA polymerase activity, which in turn inhibits non-specific annealing of primers and non-specific amplification induced by primer dimers at low temperatures. Taq Antibody denatures during the initial DNA denaturation step of the PCR reaction, when DNA polymerase activity is restored to achieve a heat-start effect. Therefore, there is no need for special inactivation of Taq antibody.

Product Performance

1. At 37°C, >95% polymerase activity can be inhibited.
2. It can improve the specificity and sensitivity of PCR reaction, including complex human genomic DNA or cDNA template, low copy number DNA or RNA, multiplex PCR, etc.
3. PCR reaction rate is faster than common chemically modified polymerase.

Activity Definition

After incubation at 25°C for 15 min, 1U Taq Antibody is defined to inhibit more than 97% of the 1U Taq DNA Polymerase activity at 37°C for 30 min.

Procedure

The Taq DNA Polymerase and Taq Antibody are mixed in equal volume at 20- 25°C for 15 mins, then put it on ice.

Note: Experimentally, it is recommended that the Taq Antibody and Taq DNA Polymerase mix in a ratio of 13:1. In practice, a range of ratios can be explored to obtain the most appropriate result, depending on the primer, product of interest, or Taq DNA Polymerase.

The following examples are the PCR reaction system and reaction conditions for the amplification of 300 bp fragment using human genomic DNA as template. In actual operation, corresponding improvements and optimization should be made according to the template, primer structure and the size of the target fragment.

1. PCR Reaction System

Reagent	50 μL Reaction System
10×PCR Buffer	5 μL
dNTP Mix，10 μM each	1 μL
Forward Primer, 10 μM	1 μL
Reverse Primer, 10 μM	1 μL
Template DNA	4 μL
A mixture of Taq DNA Polymerase and antibody	0.36 μL
ddH_2O	up to 50 μL

2. PCR Reaction Condition

PCR reaction can be performed according to the conventional PCR reaction conditions of the DNA Polymerase used for PCR.

Step	Temperature	Time	
Initialization	94°C	2 min	
Denaturation	94°C	30 s	25-35 cycles
Annealing	55-65°C	30 s	
Elongation	72°C	30 s	
Final Elongation	72°C	2 min	