Tinzyme Co., Limited

Email: sales@tinzyme.com Website: www.tinzyme.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

Taq Antibody

Product Number: ATA087

Shipping and Storage

-20°C.

Components

Component	ATA087 500U	ATA087 2500U
Taq Antibody (5U/μl)	100μl	5×100μl

Description

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.

Features

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.

Unit 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.

Protocol

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

2. PCR reaction program:

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

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