Taq Mouse Monoclonal Antibody (TBS10301)

Catalog	Unit Size
TBS10301-100	100 ul
TBS10301-500	500 ul

Description

Tribio Taq Antibody is a mouse monoclonal antibody specific to Taq DNA Polymerase, designed for use in Hot Start PCR. When combined with Taq DNA Polymerase, it temporarily inhibits enzyme activity at lower temperatures, effectively preventing non-specific primer annealing and unwanted amplification caused by primer-dimer formation. During the initial denaturation step of PCR, the antibody is heat-inactivated, allowing full restoration of polymerase activity and initiating the reaction. No additional inactivation step is required.

Main Features

- At 37°C, over 95% of polymerase activity can be inhibited, significantly improving PCR specificity and sensitivity.
- Suitable for complex human genomic DNA or cDNA templates, low copy number DNA or RNA, and multiplex PCR applications.
- PCR reaction proceeds faster than with conventional chemically modified polymerases.

Component & Package Size

Component	TBS10301-100	TBS10301-500
Taq Antibody (5U/μl)	100μl	500μl

Storage

-20°C

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.

Directions for Use

The Taq DNA Polymerase and Taq Antibody are mixed 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	

Relative Products

Tribo™ 2x Fast SYBR Green qPCR Master Mix (TBS4001)
Tribo™ 2x Fast TaqMan qPCR Master Mix (TBS4002)
Tribo™ 2x PCR Red Mix (TBS4004)

This product is for research use only.