Anti-Taq Monoclonal Antibody

CAT. NO. MA-059-0100, 100 µg

APPLICATION

- Real-time or regular hot start PCR applications;
- PCR diagnostics, genotyping, SNP etc.
- WB, ELISA, etc.

DESCRIPTION

Anti-Taq monoclonal antibodies were derived from a hybridoma (fusion of mouse myeloma cell and the cells after mouse immunization with Taq DNA Polymerase). The antibody has been tested for strong reaction to both wild type and truncated Taq (N-terminal deletion) DNA polymerase.

During PCR amplification mis-priming of Taq DNA polymerase can occur at low or room temperatures, much before the actual PCR cycle starts. Anti-Taq monoclonal antibody inhibits polymerase activity before the onset of thermal cycling, preventing nonspecific amplification and primer-dimer formation. When the temperature is raised, the antibody is quickly inactivated and PCR proceeds.

CLONALITY

Mouse Monoclonal, IgG1, Clone# B-22.

CONCENTRATION

2 mg/ml in 10 mM Tris-HCl (pH 7.0), 50 mM KCl

STORAGE TEMPERATURE

-20°C.

REACTION BUFFER

The anti-Taq monoclonal antibody reaction buffer is the same buffer used for the Taq DNA polymerases.

SPECIFICITY

This anti-Taq monoclonal antibody (MA-059-0100) is effective with a variety of commercially available Taq DNA polymerases (native or recombinant). The use of hot start anti-Taq monoclonal antibody significantly improves the specificity of PCR amplification what is especially important for PCR-based diagnostics and sequencing (see Figure 1)

PURITY

> 98% by SDS-PAGE

ASSOCIATED ACTIVITIES

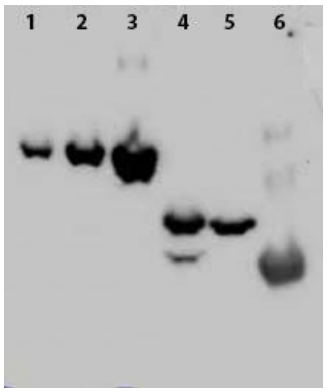
No conversion to the covalently closed circular DNA to the nicked or linear form was observed after incubation of 1 µg of pUC19 with antibodies in final concentration of 1 ng/µl in 20 µl of reaction mixture containing 25 mM Tris-HCl (pH 7.9), 100 mM NaCl, 10 mM $MgCl_2$ after 16 hours at 37°C.

Tel: 1-800-919-0755 • Fax: 1-240-683-5852 • info@eEnzyme.com • www.eEnzyme.com

PROTOCOL

1. Before making any dilution of anti-Taq antibody and Taq polymerase, add 2 µg anti-Taq monoclonal antibody to 1 µg Taq DNA polymerase (50-5,000U).
2. Mix gently and incubate at RT for about 10-20 minutes or store at 4°C.
3. Set up the PCR reaction by following the protocol of a regular thermal cycling condition used for the Taq DNA polymerase.

NOTE: for each Taq DNA polymerase or Taq from different batch, the antibody titration test must be performed to find the best ratio of antibody to Taq DNA polymerase.
Too much antibody added to Taq DNA polymerase could kill the PCR reaction!



WB:

Lane 1, EU-Taq
Lane 2, Wild-type Taq
Lane 3, Hot Start Taq (chemical modified)
Lane 4, KlenThermase™ DNA polymerase
Lane 5, Klen-Taq (N-terminal deletion recombinant Taq DNA polymerase)
Lane 6, Platinum Taq DNA polymerase (*Invitrogen*)

Tel: 1-800-919-0755 • Fax: 1-240-683-5852 • info@eEnzyme.com • www.eEnzyme.com