

Glycerol-free Anti-Taq Monoclonal Antibody

CAT. NO. MA-039-0100, 100 µg, 10 units/µl
MA-039-1000, 1 mg, 10 units/µl

APPLICATION

- Real-time or regular hot start PCR applications;
- PCR diagnostics, genotyping, SNP etc;
- Long-term storage of PCR kits;

DESCRIPTION

The Glycerol-free Anti-Taq Antibody was derived from a hybridoma (fusion of mouse myeloma cell and the cells after mouse immunization with Taq DNA Polymerase). This anti-Taq monoclonal antibody is mouse Ig G2b isotype.

Monoclonal anti-Taq antibodies are largely used to block the polymerase activity at low or room temperature, preventing pre-PCR mispriming and primer dimerization. When the temperature is raised, the antibody is quickly inactivated and PCR (or real-time PCR) proceeds. The use of Anti-Taq Monoclonal Antibody significantly improves the specificity of PCR amplification what is especially important for PCR-based diagnostics, particularly low-copy-number amplifications.

The Glycerol-free Monoclonal Anti-Taq Antibody can bind a variety of commercially available Taq DNA polymerases (native or recombinant). The glycerol-free condition eliminates the possible inhibitory effect caused by glycerol in the PCR reaction.

CLONE

8C1C.

CONCENTRATION

4 µg/µl.

UNIT DEFINITION

One unit is defined as the amount of glycerol-free anti-Taq Monoclonal Antibody

required to block 50% of activity of 1 µg of Taq DNA Polymerase at 37°C.

STORAGE BUFFER

10 mM Tris-HCl (pH 7.0 at 22°C), 50 mM KCl, 0.1 mM EDTA, 50% glycerol.

STORAGE TEMPERATURE

-20°C.

REACTION BUFFER

The glycerol-free anti-Taq Monoclonal Antibody reaction buffer is the same buffer used for the thermostable DNA polymerase.

PURITY

> 95% 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 6 u/µl in 20 µl of reaction mixture containing 25 mM Tris-HCl (pH 7.9), 100 mM NaCl, 10 mM MgCl₂ after 16 hours at 37°C.

PROTOCOL

1. Before making any dilution of anti-Taq antibody and Taq DNA polymerase, add 1 µg anti-Taq monoclonal antibody to 2 µg Taq DNA polymerase (100-10,000U).
2. Mix gently and incubate at RT for about 5-10 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.