DATA QUALITY SHEET

GENECRAFT®

Anti-Taq monoclonal Antibody

FOR RESEARCH USE ONLY

Cat. GC-029-0100, GC-029-0250, GC-029-0500, GC-029-1000

DESCRIPTION The Taq Start Monoclonal Antibodies were derived from a hybridoma (fusion of mouse myeloma cell and the cells after mouse immunization with *Taq* DNA Polymerase). Hot Start *Taq* Monoclonal Antibody is mouse IgG 2b isotype.
Hot Start *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. Hot Start *Taq* Monoclonal Antibody is effective with a variety of commercially available *Taq* DNA polymerases (native or recombinant). The use of Hot Start *Taq* Monoclonal Antibody significantly improves the specificity of PCR amplification what is especially important for PCR-based diagnostics.

APPLICATION
- Hot Start PCR
- PCR-based diagnostics

CONCENTRATION 4 mg/ml

UNIT DEFINITION One unit is defined as the amount of Hot Start Taq Monoclonal Antibody required to block 50% of 1 µg Taq polymerase at 37°C.

U/mg RATIO 2500 units of specific activity are equal to 1 mg of antibodies

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

STORAGE TEMP. Store Hot Start Taq Monoclonal Antibody at -20ºC in a constant temperature freezer.

REACTION BUFFER The Hot Start Taq Monoclonal Antibody reaction buffer is the same buffer used for the thermostable DNA polymerase.

PURITY More than 95% in SDS electrophoresis in 15% PAAG

ASSOC. 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 $MgCl_2$ after 16 hours at 37°C.

PROTOCOL The amount of antibodies required for *Taq* polymerase activity inhibition depends not on the units of the enzyme, rather the amount of *Taq* polymerase as protein! The ratio units/mg of *Taq* polymerase varies strongly from preparation to preparation of the different producers. We recommend to use 2 µl of antibody per 8 µl (40 units) of BioTherm™ *Taq* DNA polymerase.

SHELF LIFE 2 years from date of receipt under proper storage conditions.

FUNCTIONAL ANALYSIS Tested functionally in a unit activity test.