Certificate of Analysis

Cat. No._____
Part No._____
Lot No._____
Order Date_____

All **ShineGene Inc.** Products are assayed as needed to ensure performance at the given specifications. **ShineGene Inc.** certifies this product will perform to the stated specification is handled properly.

Shanghai ShineGene

Pfu DNA Polymerase

Storage condition: The undiluted enzyme solution is stable when stored at -20℃.

Activity:2U/ul

Storage and dilution buffer: 20mM Tris-HCl; 1mM dithiothreitol; 0.1mM EDTA; 0.1M KCl; Nonidet P40, 0.5%(v/v); Tween 20, 0.5%(v/v); glycerol, 50%(v/v); pH 8.0 (4℃).

Unit definition: One unit is defined as the amount of enzyme required to catalyze the incorporation of 10mmols of dNTP into an acid-insoluble material in 30 minutes at 74℃. The reaction conditions are: 50mM Tris-HCl, (pH 9.0 at 25℃), 50mM NaCl, 10mM $MgCl_2$, 200uM dATP, dCTP, dGTP and radiolabelled dTTP, and 12.5ug activated calf thymus DNA in a 50ul reaction.

10×Reaction buffer : (200mM Tris-HCl (pH 8.8 at 25°C), 100mM KCl, 100mM (NH4)2SO4, 20mM MgSO4, 1.0% Triton X-100 and 1mg/ml Nuclease-Free BSA)

Note: It is recommended to add dNTPs to this incubation mixture shortly before use. This is to prevent decomposition of the deoxynucleoside thiphosphate that occurs during Prolonged storage at the alkaline pH values required for optimal enzyme activity.

Quality control

Each lot of Pfu DNA Polymerase is tested for activity in PCR and efficient incorporation of digoxigenin-11-dUTP, and in DNA sequencing of M13mp18ssDNA. A minimum of 250 bases must be clearly legible in the sequencing gel. Each lot of Pfu DNA ploymerase is tested for contaminating activities as stated below.

Test buffer: 10mM Tris-HCl; 1.5mM $MgCl_2$; 50mM KCl; pH 9.0 (20℃). 0.1mg/ml gelatin.

Absence of endonucleases: 1ul lambda DNA is incubated with Pfu Dna polymerase in 50ul test buffer with a paraffin oil overlay at 65℃ for 16 hours. The amount of enzyme showing no degradation of the lambda DNA is ststed under “Endol”.