

GeNei™ HotStart Taq DNA Polymerase

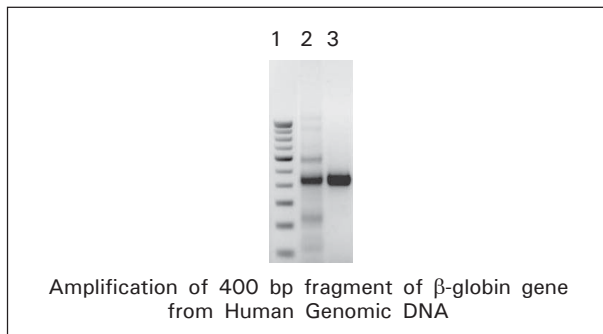
Most thermophilic polymerases exhibit significant polymerase activity even at ambient temperatures resulting in low sensitivity and non-specificity leading to misinterpretation of results specifically in clinical applications. This can be avoided by adding enzyme after the initial denaturation (Manual Hot Start). Hence there has been a clear trend towards the use of Thermostable polymerases that remain inactive at lower temperatures (below 50°C).

Description: GeNei™ HotStart Taq DNA Polymerase is an optimized mixture of highly purified Taq DNA polymerase with high affinity anti-Taq monoclonal antibody that inhibits polymerase activity by binding to Taq DNA Polymerase. The enzyme remains inactive until the reaction mixture reaches higher temperature. Complete activation is restored after the initial denaturation step at 94°C for 2-5 minutes, thereby providing an automatic "Hot start" for Taq DNA Polymerase.

Performance Test:

- GeNei™ Hotstart Taq DNA Polymerase is tested extensively for its reproducible performance in critical PCR amplifications and in RT-PCR.
- Enzyme is tested for amplification of 131 bp fragment of TNF gene and 400 bp fragment of β-globin gene from human genomic DNA using non-optimal primers.
- Enzyme is tested for detecting different subtypes of Human Papilloma virus (HPV) using consensus primers.

Storage: -20°C



- Lane 1 : 100 bp DNA Ladder
- Lane 2 : Amplification with Taq DNA Polymerase (400 bp)
- Lane 3 : Amplification with GeNei™ HotStart Taq DNA Polymerase (400 bp)

Application:

- Enhancement of specificity and sensitivity in the detection of low copy number templates in complex DNA background.
- For Use in diagnostic labs to detect both infectious and genetic disorders by DNA based diagnosis.
- Variations in setup time does not affect the final product in Highthroughput PCR.

Highlights:

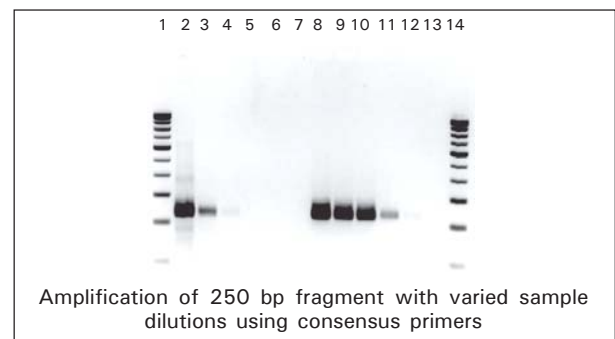
- Highly specific
- Low background
- Higher yields
- Easy to use
- Saves time and effort
- Variation in set up time do not affect reproducibility
- Overcomes limitation of manual hot start

GeNei™ HotStart Taq DNA buffer (1X): 10 mM Tris-HCl (pH 9.0), 50 mM KCl, 1.5 mM MgCl₂ and 0.01% gelatin.

Storage and Dilution buffer: 20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 0.5% Tween 20 (v/v), 0.5% Igepal and 50% Glycerol (v/v).

Specification: The enzyme is supplied at a concentration of 3 U/μl.

With every order of GeNei™ HotStart Taq DNA Polymerase we supply (a) 10X Assay buffer (b) 25 mM MgCl₂



- Lane 1 & 14 : 100 bp DNA Ladder
- Lane 2-7 : Amplification with Taq DNA Polymerase (10⁻¹ to 10⁻⁶ dilutions)
- Lane 8-13 : Amplification with GeNei™ HotStart Taq DNA Polymerase (10⁻¹ to 10⁻⁶ dilutions)