ImTec DIAGNOSTICS NV

Geneaid

Polymerase Chain Reaction (PCR)

Ultra-Pure Taq DNA Polymerase (UT050, UT250)

Ultra-Pure Taq DNA Polymerase is a thermostable enzyme which is purified to reduce levels of contaminating DNA, making it well suited for PCR and sensitive experiments using bacterial templates or random primers. The high purity of this Taq DNA Polymerase makes it ideal in detecting and identifying bacterial DNA, and is a more accurate method for mutation scanning techniques while preventing the amplification of undesired DNA sequences. Ultra-Pure Taq DNA Polymerase is suitable for work in bacterial genomics due to the reduced probability of contamination leading to non-specific amplification or artifacts during PCR reactions. The amplified products are up to 8 kb with 3' adenosine residues and are ready to use directly in TA cloning.

Advantages

- Excellent for sensitive experiments
- Ideal in detecting and identifying bacterial DNA
- Amplification: up to 8 kb
- Storage: -20ºC for extended periods
- Shipping: Dry ice is not required
- 3' to 5' Exonuclease Proofreading Ability: NO
- 5' to 3' Exonuclease Activity: YES

Applications

Screening, Primer Extension, Amplification, Terminal dA Tailing

Source

Recombinant sourced Ultra-Pure Taq DNA Polymerase is expressed and purified from an *E. coli* strain which carries the *Taq* DNA Polymerase gene from *Thermus aquaticus.*

Composition

Storage Buffer: 20 mM Tris-HCl, pH8.0, 0.1 EDTA, 1 mM DTT, 1.0% Triton X-100, 50% Glycerol
10X PCR Buffer: 150 mM Tris-HCl, pH8.75 at 25ºC, 500 mM KCl, 20 mM $MgCl_2$, 1.0% Triton X-100

Ultra-Pure Taq DNA Polymerase Test Data

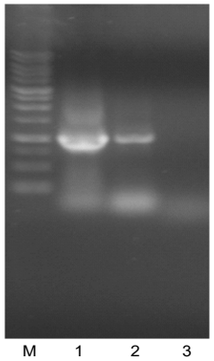
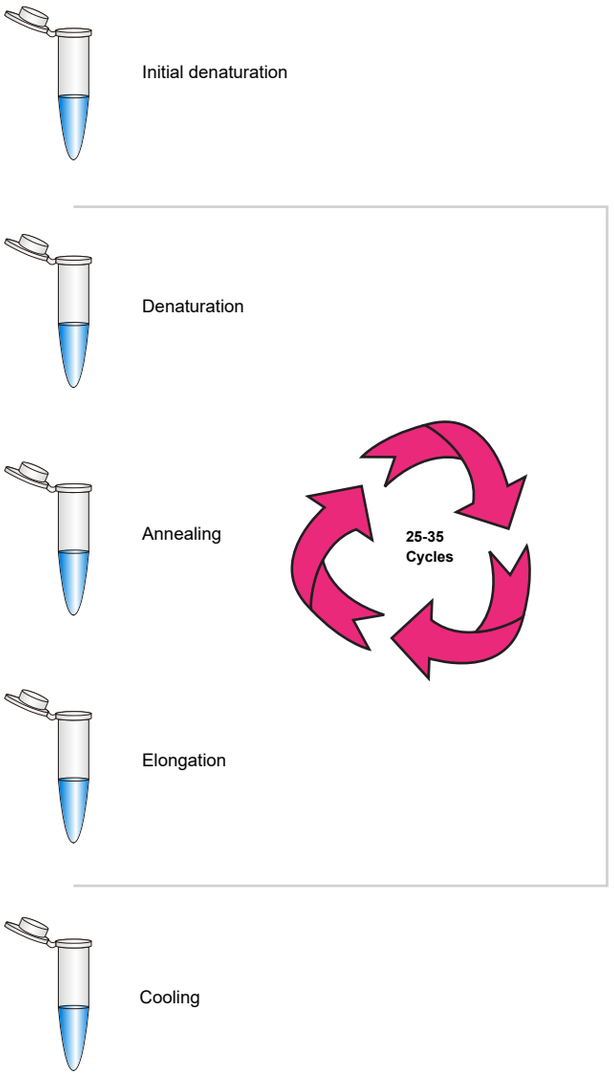


Figure 1. Following 30 PCR cycles a 950 bp bacterial 16S ribosomal DNA fragment was successfully amplified in the lane 1 PCR reaction using Ultra-Pure Taq DNA Polymerse + bacterial genomic DNA template. 5 µl of DNA product was loaded into a 1% agarose gel and analyzed by electrophoresis.

Lane M: Geneaid 1 Kb DNA Ladder
Lane 1: Ultra-Pure Taq DNA Polymerase + Bacterial gDNA Template
Lane 2: Conventional Taq DNA Polymerase (no bacterial gDNA template)
Lane 3: Ultra-Pure Taq DNA Polymerase (no bacterial gDNA template)

General *Taq* DNA Polymerase Thermal Cycling Program



High-Fidelity (HiFi) Taq DNA Polymerase (HT050)

High Fidelity (HiFi) Taq DNA Polymerase is an enzyme blend of recombinant Pfu and recombinant *Taq* DNA Polymerase with an efficient proofreading 3' – 5' exonuclease activity for improved PCR reactions. High Fidelity Taq DNA Polymerase is an efficient enzyme mixture that greatly increases fidelity and amplification of genomic targets up to 10 kb with high specificity, sensitivity, accuracy, and yield.

Advantages

- Proofreading 3' to 5' exonuclease activity
- Amplification: up to 10 kb
- Storage: -20ºC for extended periods
- Shipping: Dry ice is not required
- 5' to 3' Exonuclease Activity: YES
- Cost effective

Applications

Full-length Gene Amplification, Gene Mutation Detection, L-PCR, PCR-ELISA

Source

Recombinant sourced HiFi Taq DNA Polymerase is expressed and purified from an *E. coli* strain which carries the *Taq* DNA Polymerase gene from *Thermus aquaticus.*

Composition

Storage Buffer: 20 mM Tris-HCl, pH8.0, 0.1 EDTA, 1 mM DTT, 1.0% Triton X-100, 50% Glycerol
10X PCR Buffer: 100 mM KCl, 20 mM $MgSO_4 \cdot 7H_2O$, 200 mM Tris-HCl, pH8.8, 1.0% Triton X-100, 100 mM $(NH_4)_2SO_4$, 1 mg/ml BSA

Ultra-Pure Taq PCR Master Mix (UTM200, UTM400)

Ultra-Pure Taq PCR Master Mix includes all of the necessary components (with the exception of template and primer) to perform PCR. Ultra-Pure Taq DNA polymerase, dNTPs, $MgCl_2$ and reaction buffers are provided at optimized concentrations. Simply add primers, template DNA and sterile water to a final volume of up to 100 µl to complete the PCR reaction mix in routine PCR assays including colony PCR and recombinant screening PCR.

Advantages

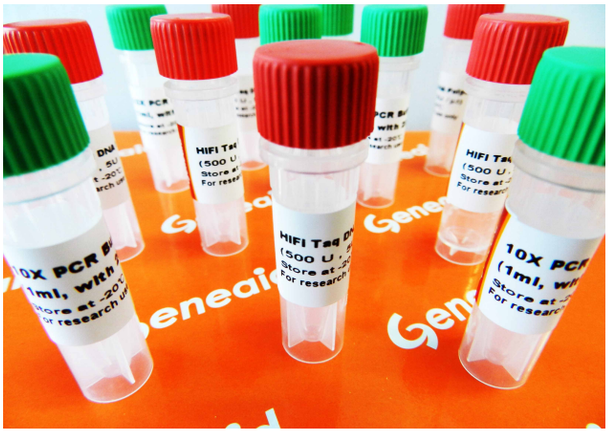
- Ready-to-use mix for fast PCR set up
- 400 rxns (e.g. volume = 2 ml. 5 µl per PCR reaction = 400 rxns)
- 5X (200 U/ml Taq, 1.25 mM dNTPs, 10 mM $MgCl_2$)
- Amplification of long targets: 100 bp – 5 kb
- Storage: 1 year at 4ºC
- Shipping: Dry ice is not required
- 3' to 5' Exonuclease Proofreading Ability: NO
- 5' to 3' Exonuclease Activity: YES
- Cost effective

Source

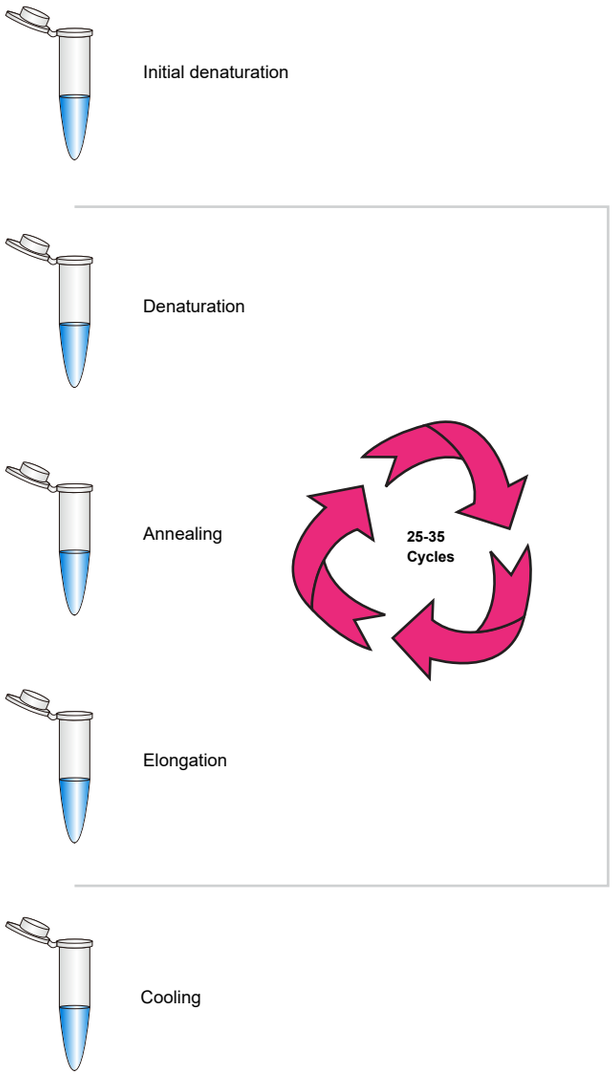
Recombinant sourced Ultra-Pure Taq DNA Polymerase is expressed and purified from an *E. coli* strain which carries the *Taq* DNA Polymerase gene from *Thermus aquaticus.*

Composition

Storage Buffer: 20 mM Tris-HCl, pH8.0, 0.1 EDTA, 1 mM DTT, 1.0% Triton X-100, 50% Glycerol
10X PCR Buffer: 150 mM Tris-HCl, pH8.75 at 25ºC, 500 mM KCl, 20 mM $MgCl_2$, 1.0% Triton X-100



General *Taq* DNA Polymerase Thermal Cycling Program



Ultra-Pure Taq PCR Master Mix with Dye

Ultra-Pure Taq PCR Master Mix with Dye includes all of the necessary components (with the exception of template and primer) to perform PCR. Taq DNA polymerase, dNTPs, $MgCl_2$ and reaction buffers are provided at optimized concentrations. Simply add primers, template DNA and sterile water to a final volume of up to 100 µl to complete the PCR reaction mix in routine PCR assays including colony PCR and recombinant screening PCR. Ultra-Pure Taq PCR Master Mix is premixed with DNA loading dye allowing for quick agarose gel loading of PCR products following PCR reactions.

Advantages

- Ready-to-use mix for fast PCR set up
- Premixed with DNA loading dye allowing for quick agarose gel loading
- 100 rxns (amplification of long targets: 100 bp – 5 kb)
- 2X (100 U/ml Taq, 0.5 mM dNTPs, 4 mM $MgCl_2$)
- Storage: 1 year at 4ºC
- Shipping: Dry ice is not required
- 3' to 5' Exonuclease Proofreading Ability: NO
- 5' to 3' Exonuclease Activity: YES
- Cost effective

Source

Recombinant sourced Ultra-Pure Taq DNA Polymerase is expressed and purified from an *E. coli* strain which carries the *Taq* DNA Polymerase gene from *Thermus aquaticus*.

Composition (TQMD100)

Storage Buffer: 20 mM Tris-HCl, pH8.0, 0.1 EDTA, 1 mM DTT, 1.0% Triton X-100, 50% Glycerol
10X PCR Buffer: 150 mM Tris-HCl, pH8.75 at 25ºC, 500 mM KCl, 20 mM $MgCl_2$, 1.0% Triton X-100

Deoxynucleotide Triphosphates (dNTPs)

Our PCR-grade deoxynucleotide triphosphates (dNTPs) are produced using strict quality control guidelines to ensure the highest purity possible. Our PCR Grade nucleotides are conveniently available as single nucleotide 100 mM solutions of dATP, dCTP, dGTP, and dTTP (2´-deoxynucleoside 5´-triphosphates) in ddH_2O, nucleotide sets (all 4 nucleotides in separate 100 mM vials), or as 10 and 25 mM dNTP solutions, dATP, dCTP, dGTP, and dTTP (2´-deoxynucleoside 5´-triphosphates) in Tris-HCl, pH7.5 premixed solutions of all 4 nucleotides with each nucleotide concentration of either 10 or 25 mM.

Advantages

- High Purity: 99% pure by HPLC
- Improved PCR results
- Free from PCR inhibitors
- DNase, RNase and Nickase free
- pH: 7.5
- Storage: -20ºC for 24 months
- Shipping: 2-8ºC (dry ice is not required)
- Cost effective

Applications

PCR, Genotyping, High fidelity and long range PCR assays, cDNA synthesis, RT-PCR, Real-time PCR, Microarrays, LAMP-PCR, DNA labeling and DNA sequencing, Nick translation, Primer extension, Fill-in, TdT tailing reactions, Dilution of radiolabeled dNTPs, Site-directed mutagenesis, Next generation sequencing

Geneaid™ qPCR Tube Strips And Caps

Geneaid™ 0.2 ml qPCR Tube Strips And Caps are ideal for qPCR and PCR. The uniform, thin walls of the qPCR tube strips allow for even thermal transfer, facilitating optimal amplifications in most thermal cyclers. The high quality polypropylene qPCR Tube Strips And Caps are manufactured in a clean room facility and are certified DNase, RNase and Pyrogen free. The separate dome caps seal tightly to eliminate the risk of sample contamination in the 0.2 ml qPCR Tube Strips.