Differentiating Research

Product Details

LEO GOLD Taq (5U/µL)

Antibody HotStart Taq DNA Polymerase

Product Overview

Leo Gold Taq DNA Polymerase (5U/µL) with Antibody HotStart technology is a cutting-edge enzyme designed to elevate PCR performance by enhancing specificity and efficiency. This enzyme utilizes an antibody-mediated HotStart mechanism, which keeps the Taq DNA polymerase inactive at lower temperatures. The antibody is released during the initial heating step, activating the enzyme and preventing nonspecific amplification and primer-dimer formation.

This advanced polymerase is suitable for a wide range of PCR applications, including gene cloning, sequencing, genotyping, and mutagenesis. Leo Gold Taq DNA Polymerase ensures high sensitivity, allowing for the detection of low-copy targets with precision. Its superior fidelity and processivity enable the amplification of longer and more accurate DNA fragments, making it ideal for both routine and challenging PCR protocols.

Leo Gold Taq DNA Polymerase comes in a ready-to-use format, which simplifies the preparation process by incorporating all necessary components such as dNTPs, MgCl2, and optimized reaction buffers. This convenience minimizes the risk of contamination and reduces setup time, streamlining your PCR workflow.

Catalog Details

R5201	1000 Units
R5202	3000 Units

STORAGE

-20 C

PCR Protocol

Components	50µL reaction	Final Concentration
Template DNA	1 µL	5ng to 250ng
Forward Primer (10µM)	1µL	0.1 - 1µM
Reverse Primer (10µM)	1µL	0.1 - 1µM
dNTP MIX (2.5mM each)	4 µL	Upto 200 µM
10X Taq Reaction Buffer	5 µL	1X
LEO GOID Taq DNA Polymerase (5U/µL)	0.5 µL	0.5 - 1.25 U
Nuclease Free Water	Upto 50 µL	

NOTES:

- To collect all liquid at the bottom of the vial, reaction mix can be kept for a quick spin (10 seconds).
- While doing PCR without heat lid, it is recommended to overlay the sample with 1-2 drops of mineral oil.

Step	Temperature	Time	Cycle
Initial denaturation	95 ℃	2 minutes	1
Denaturation	95 ℃	30s	25 - 35
Annealing *	45 - 65 ℃	30s	
Extension	72 ℃	1 minute/kb	
Final Extension	72 ℃	5 to 10 minutes	1
Hold, if required.	2- 8 ℃	variable	1

*Annealing temperature is based on the Tm (Melting point) of the primer pair used. Melting point increases with increase in GC content.

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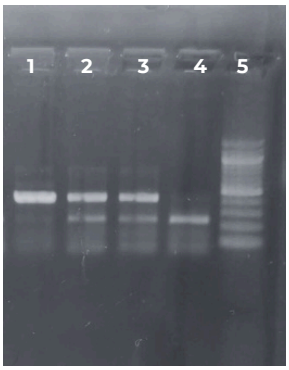
RESULTS



Leo Gold Taq DNA Polymerase is used in Leo Gold Mastermix(2X). The result is just the demonstration of hotstart properties of the Taq Polymerase.

Lane 1: Leo Gold

Lane 2: Competition Amp

Lane 3; Competition TA

Lane 4: Competition TH

Lane 5 : Marker

One of the house keeping gene (450bp) from human was amplified using different mastermixes. The reaction mixture was incubated for 2 hours at room temperature before the actual PCR. From the image, its clear that LEO GOLD Mastermix containing hotstart Taq DNA Polymerase gives good amplification with almost no non-specific bands.

Quality Control Assays

1. **Purity:** SDS Page analysis with Coomassie Blue Staining resulted in ≥ 97% purity for Taq.
2. **Nuclease tests:** No contamination of endo or exonucleases were detected.

Our other products

- Polaris SYBR Green Mastermix
- cDNA Synthesis Mastermix and Kits
- VEGA OneStep Mastermix
- DNA Markers
- LEO and LEOPRIME Mastermixes
- POLARIS AMP Taqman probe mastermix
- Proteinase K
- PNGase F Enzyme

Our Expert Services

- Gene synthesis
- Guide RNA synthesis
- Antibody production
- Probes & Oligopool synthesis
- CRISPR KO Vectors
- Expression in Bacteria, Mammalian Cells
- CRISPR Cas9 Designs for sgRNA
- Peptide Synthesis

Contact details

- info@dxbidt.com | +91-7349708807 | www.dxbidt.com