



AuPreP™ Super Fidelity TaQ DNA Polymerase

A robust pre-optimized Polymerase with Ultra high Fidelity coupled with high yield and produces blunt ended amplicons upto 5kb in length

Cat # : AUP-HFT-250R (250 Rxns.)

Applications -- The product is highly suited for High Fidelity requirements for subsequent cloning; blunt ended cloning and is DHPLC compatible

Product Description -- AuPreP Super Fidelity TaQ DNA Polymerase is a thermostable enzyme possessing 5'-3' DNA polymerase and 3'-5' proofreading exonuclease activities, offering high fidelity. It produces blunt-ended amplicons of up to 5Kb in length. AuPreP Super Fidelity TaQ DNA Polymerase is supplied with 10x Reaction Buffer containing MgSO₄, which provides optimal final reaction conditions (2mM Mg²⁺) for most experiments. In order to allow optimization of reaction conditions, additional MgCl₂ is provided.

Reaction Conditions (for a 50µl reaction)

| | |
|--------------------------------|-------------|
| 10x Buffer | 5µl |
| 50mM MgCl ₂ | Optional |
| 100mM dNTP Mix (see below) | 0.5 – 1µl |
| Template and Primers | as required |
| AuPreP Hotstart DNA Polymerase | 1-3 µl |
| Water (ddH ₂ O) | up to 50µl |

Denature: 94-97°C

Ext Extension : 68°C Allowing 0.5 -1 minutes per Kb

We recommend to use PCR DOCTOR for GC / AT / Dirty / Difficult Templates. Hence order it separately. How to use the PCR DOCTOR ? Compose the reaction mix, containing buffer, dNTPs, Mg²⁺, template DNA, primers, DNA polymerase. Add 2x PCR DOCTOR at the volume of half of the final volume of the reaction (e.g. 25ul per 50ul final volume, etc). Add ddH₂O up to the final volume and mix with pipetting .

Due to its inherent 3'-5' exonuclease activity, the enzyme must be added last to a reaction in order to prevent primer damage.

This data is intended for use as a guide only; conditions will vary from reaction to reaction and may need optimization.

General Considerations: The suggested final concentration of Mg²⁺ in the reaction is likely to be 2-4mM, but some optimization may be necessary to achieve the best possible results. Please, note that the reaction buffer already provides 2mM Mg²⁺. For first tests, use no less than 2.5 units of AuPreP Super Fidelity TaQ DNA Polymerase in a 50µl reaction

Components:

| | 250 Units |
|--|-----------|
| AuPreP Super Fidelity TaQ DNA Polymerase | 100 µl |
| 10x Buffer | 1.2ml |
| 50mM MgCl ₂ Solution | 1.2ml |

10x Buffer: 600mM Tris-HCl, 60mM (NH₄)₂SO₄, 100mM KCl, 20mM MgSO₄, pH 8.3 at 25°C

AuPreP Super Fidelity TaQ DNA Polymerase Storage Buffer: 10mM Tris-HCl, pH 8.0, 100mM KCl, 0.1mM EDTA, 1mM DTT, 50% Glycerol, and stabilizers.

Storage Conditions: @ -20°C for 1 year

Shipping Conditions: Dry Ice/ Blue Ice

Unit Definition:

One unit is defined as the amount of enzyme that incorporates 10nmoles of dNTPs into acid-insoluble form in 30 minutes at 72°C.

RELATED PRODUCTS

AuPreP TaQ DNA Polymerase (Ultrapure, Ultra-stable & Ultra-sensitive Taq DNA Polymerase)

AuPreP Hotstart TaQ DNA Polymerase (Robust Polymerase for Hotstart PCR assays)

AuPreP Super Fidelity TaQ DNA Polymerase (High fidelity Polymerase produces blunt ended amplicons upto 5Kb)

PCR Doctor - (PCR enhancement additive used with AuPreP Hotstart Taq or AuPreP Super Fidelity Taq especially designed for GC/AT/Dirty/Difficult Templates)

AuPreP Red PCR Master Mix (2x Master mix with Red Dye without Enhancer)

AuPreP DIAMOND MASTER-MIX (2x Mastermix with PCR Enhancer & Stabilizer but without dye)

AuPreP DIAMOND DOUBLE DYE MASTERMIX (2x Mastermix with PCR Enhancer, Stabilizer & tracking dyes)

AuPreP Gold cDNA Synthesis Kit (cDNA Synthesis Kit using RT with reduce Rnase H activity)

AuPreP Gold RT-PCR Combo Kit (two-step RT-PCR protocol with tracking dye)

Novascript III Rnase H⁻ RT (Premium Rnase H⁻ Reverse transcriptase offering top performance)

Novascript III single step RT-PCR System (1step RT-PCR system using Novascript & AuPreP Hotstart DNA Polymerase)