

Taq Plus DNA Polymerase

Cat. No. CMC02 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description

Taq Plus DNA Polymerase is a special formulation designed for amplify large fragment. The main component is Taq DNA Polymerase, and some special additives such as Pfu DNA Polymerase are added to enhance the efficiency of amplification reaction. Theoretically, Taq Plus produces significantly higher yields of PCR products than ordinary Taq Polymerase, especially for fragments >1 kb, and can amplify up to 30 kb. Taq Plus also contains a proofreading activity that reduces the error rate of Taq Polymerase. Taq Plus is suitable as a direct replacement for ordinary Taq Polymerase in most applications.

Feature

High fidelity: With an error frequency of 1.6×10^{-6} during DNA synthesis. Higher yield: Taq Plus increases the efficiency of polymerization reaction, resulting in a great percentage of extenuation reaction completion up to 10 kb to 30 kb. Rely on a Performance-Tested Enzyme: Creative BioMart PCR systems, enzymes and reagents are proven in PCR to ensure reliable, high-performance results. If you are not completely satisfied with any of our PCR product, we will send a replacement or refund your account.

Applications

Amplification of complex template with high GC content or secondary structure and demand of high fidelity.

Unit Definition

One unit of the enzyme catalyzes the incorporation of 10nmole of deoxyribonucleotides into a polynucleotide fraction in 30min at 74°C.

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Quality Control Tests	PCR, Activity, endonuclease/nickase, Specific performance test.
Storage	Taq Plus DNA polymerase in 20mM Tris-HCl, pH 8.0, 100mM KCl, 0.1mM EDTA, 5mM DTT, 50% glycerol, 0.5% NP40 and 0.5% Tween 20 should be stored at -20°C.
10× Reaction Buffer with MgSO₄	500mM KCl, 100mM Tris-HCl (pH 9.0 at 25°C) and 1% Triton X-100, 100mM (NH ₄) ₂ SO ₄ , and 35mM MgCl ₂ . Buffer is optimized for use with 0.2mM of each dNTP.
Reaction Condition	DNA synthesis is performed in 100µl of mixture containing 20-200µM dNTPs, 0.3-1µM Primers, 0.1-0.250mg of template DNA, 10 µl of 10 x reaction buffer and 2.5-5 units of Taq Plus. Mix the reaction gently, centrifuge briefly and then overlay with light mineral oil. Initially, denature the reaction by incubating at 95°C for 5 minutes and then cool to 40-68°C for 5 minutes to allow the primers to anneal to the template DNA.
Reaction Conditions:	To amplify a 10kb DNA template Set up PCR reactions as follows: Taq Pfu DNA Polymerase 0.2µl 2.5mM dNTP Mixture 4µl 10× Reaction Buffer with MgCl ₂ 5µl 10µM Primers 1µl each Template ~1µl ddH ₂ O 38µl