

Pfu DNA Polymerase II

Product Information

MW	90 kDa (Reducing)
Cat#	POL-004
Form	Liquid
Label	His Tag
Notes	It is critical to withhold Pfu DNA Polymerase until after the addition of dNTPs; otherwise, the proofreading activity of the polymerase may degrade the primers, resulting in nonspecific amplification and reduced product yield. Assemble on ice.
Purity	> 95% by SDS-PAGE and HPLC
Storage	Store at -25 ~ -15°C for 2 years.
Activity	5 U/μL
Synonyms	DNA polymerase, DNA polymerase B, Pfu polymerase, Pol I
Component	5 U/μL Pfu DNA Polymerase II, 20 mM Tris-HCl, 0.1 mM EDTA, 0.1% Tween20, 0.1% triton X100, 1 mM DTT, 100 mM KCl, 50% Glycerol, pH 8.2 at 25°C
Description	Pfu DNA Polymerase is a thermostable enzyme that replicates DNA at 75°C. It catalyzes the polymerization of nucleotides into duplex DNA in the 5'→3' direction in the presence of magnesium. The enzyme has a molecular weight of approximately 90,000 daltons as estimated from the predicted amino acid sequence and exhibits 3'→5' exonuclease (proofreading) activity.
Applications	Pfu DNA Polymerase is recommended for use in PCR and primer extension reactions that require high fidelity.
Specification	250 U; 1000 U
Dilution Buffer	20 mM Tris-HCl, 0.1 mM EDTA, 0.1% Tween20, 0.1% triton X100, 1 mM DTT, 100 mM KCl, 50% Glycerol, pH 8.2 at 25°C
Expression	E.coli

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System

10× Reaction Buffer	200 mM Tris-HCl (pH 8.8), 20 mM MgSO ₄ , 100 mM KCl, 100 mM (NH ₄) ₂ SO ₄ , 1% Triton X-100, 1 mg/mL nuclease-free BSA.
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Activity Definitions	One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 74°C
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