

Product Data Sheet

□ Cat # RP-395 Recombinant Taq Plus DNA Polymerase **Size:** □ 250 U

Taq Plus is a mixture of Taq and Pfu. Taq Plus, which is used to improve the reliability and yield of conventional primer extension reaction. Taq Plus has two following advantages over Taq: (1) high fidelity with an error frequency 1.6/10⁶ (or 0.0016/10³) during DNA synthesis. (2) Taq Plus increases the efficiency of polymerization reaction, resulting in a great percentage of extenuation reaction completion up to 10 kb to 30 kb. Pfu has a temperature optimum between 72-78°C and remains > 95% active following 1-hour incubation at 95°C.

Source: Recombinant E.colicontains Thermus aquaticus polymerase gene. 20mM Tris-HCl (pH 8.0), 1mM DTT, 0.1mM EDTA, 100mM KCl, Stabilizers, and 50%glycerol.

Unit Definition:

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

Applications and Suggested Dilutions: 5U/μl 10X Reaction Buffer: 200 mM TrisHCl (pH 8.8) 100 mM KCl 100 mM (NH₄)₂SO₄ 20 mM Mg SO₄ 1% Triton X-100 1 mg/ml bovine serum albumin (BSA). Note: All reagents, including Taq Plus, should be mixed immediately before use. DNA synthesis is performed in 100μl of mixture containing 20-200μM dNTPs, 0.3-1μM Promers, 0.1-0.250 mg 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° for 5 minutes and then cool to 40-68° for 5 minutes to allow the primers to anneal to the template DNA. Users must optimize the appropriate concentration and conditions for each assay.

It is important to add the reaction components in the following order:

1. H₂O
2. 10 x reaction buffer
3. dNTPs
4. DNA template and primers
5. Taq Plus

Storage and Stability: Stable for 5 days at 10°C, for longer period of time store at -20°C If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

Usage: This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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