

Green *Taq* DNA Polymerase

DATASHEET

Version: 201807

Cat. No.: E00043

Size: 1,000 U

Description:

Green *Taq* DNA Polymerase is designed to increase the stability of the *Taq* enzyme for more convenient transport and applications. The polymerase (1000 U) is designed for 400 rxns if 2.5 U are used per 50 μ L PCR reaction. It can be stable for six months if stored at 4°C or for up to one month without significant loss of activity at ambient temperature. Our technology can increase the stability of Green *Taq* DNA at higher temperature (72°C). The higher yield PCR product can be harvested in long PCR amplification.

Key Feature:

- High Stability: The enzyme remains stable for more than six months when stored at 4°C or for one month when stored at room temperature (25°C) without significant activity loss.
- High PCR Yield: The Green *Taq* DNA polymerase has longer enzyme half-life and therefore increases the PCR yield when amplifying long DNA
- Terminal Transferase Activity: *Taq* DNA polymerase has terminal transferase activity that results in the addition of a single nucleotide (adenosine) at 3'-end of the extension product.

Unit Definition:

One unit is defined as the amount of enzyme

that can incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 74°C.

PCR Reaction Buffer (with Mg²⁺)

100 mM Tris-HCl, 15 mM MgCl₂, 500 mM KCl and 1% Triton X-100, pH 8.3 (4°C).

Storage:

This product is shipped at ambient temperatures for several weeks. Green *Taq* DNA Polymerase will remain stable for at least six months if stored at 4°C and for at least two years if stored at -20°C.

Formulation:

The polymerase is designed for 400 rxns if 2.5 U are used per 50 μ L PCR reaction. It can be stable for six months if stored at 4°C or for up to one month without significant loss of activity at ambient temperature.

Applications:

The applications of Green *Taq* DNA Polymerase include the following:

- PCR* (For simple templates, this enzyme can be optimized for amplification of PCR products up to 10 kb; However, for complex templates, this enzyme can be used for amplification of PCR products up to 3 kb.)
- 3' A-tailing of blunt ends (T/A-cloning)
- Primer extension
- DNA labeling reactions