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Address: 6F-3, 23 Lane 169, Kang Ning St.,
Shijr, Taipei, 22180 Taiwan.

Tel: +886-2-2695-3922 **Fax:** +886-2-2695-3979

Email: yeastern@yeastern.com.tw



YEAtaq DNA Polymearse



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Cat. No.
FYT001-500U
FYT011-500U

YEAtaq DNA Polymerase

Concentration: 2.5 U/μl

Storage: -20 °C

Description

YEAtaq DNA Polymerase is a thermostable enzyme derived from the thermophilic bacterium. The enzyme is in a recombinant form expressed in *E. coli*. It is able to withstand repeated heating to 95°C without significant loss of activity.

| Cat. No. | FYT001-500U | FYT011-500U |
|--|-------------|-------------|
| YEAtaq DNA polymerase (2.5 U/μl) | 100 μl x 2 | 100 μl x 2 |
| 10× Reaction Buffer (with 20 mM Mg ²⁺) | 2 ml | 2 ml |
| 10 mM dNTPs Mix | 200 μl | -- |

Storage Buffer:

50 mM Tris-HCl (pH 9.0), 100 mM NaCl, 0.1 mM EDTA, 1% Triton X-100, 5 mM DTT, 50% Glycerol, Stabilizers.

10× Reaction Buffer:

100 mM KCl, 20 mM MgSO₄·7H₂O, 200 mM Tris-HCl (pH 9.0), 1% Triton X-100, 100 mM (NH₄)₂SO₄, 1 mg/ml BSA.

The reaction buffer is supplied as a 10× concentrate and should be diluted before use.

Unit Definition

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTPs into acid-insoluble material in 30 minutes at 72 °C.

Quality Control

Nuclease activity is not detected after incubation of 1 μg of lambda/Hind III DNA with 2.5 units of YEAtaq DNA Polymerase in 50 μl reaction volume in the supplied Reaction Buffer for 18 hr at 37 °C.

General Reaction Conditions

The optimal conditions for the concentration of YEAtaq DNA polymerase, MgSO₄, primers and template DNA will depend on the system being utilized. It may be necessary to determine the optimal condition for each individual component.

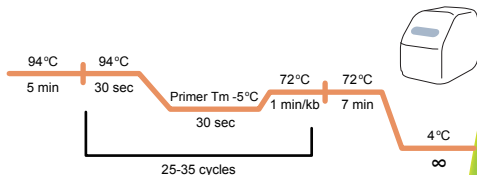
A. Add the following components to a sterile tube on ice



| Component | Volume | Final conc. |
|----------------------------------|------------|-------------|
| 10× Reaction Buffer | 5 μl | 1× |
| 10 mM dNTPs mix | 0.5-1.0 μl | 0.1-0.2 mM |
| Primer mix (10 μM each) | 1 μl | 0.2 μM |
| Template DNA | 0.5-10 μl | |
| YEAtaq DNA polymerase (2.5 U/μl) | 0.5 μl | 1.25 U |
| ddH ₂ O | variable | |

Total volume 50 μl

B. Suggested cycling parameters for YEAtaq DNA Polymerase



C. Analyze the amplified products by agarose gel electrophoresis and visualize by ethidium bromide staining