

## Taq DNA Polymerase 500 Units

Cat No.110003

### DATA-SHEET

Taq DNA Polymerase is a thermostable enzyme of approximately 94kDa, isolated from Eubacterium Thermus aquaticus strain YT-1(1). This unmodified enzyme replicates DNA at 72 °C. The enzyme catalyzes the polymerization of nucleotides into duplex DNA in the 5'-->3' direction in the presence of magnesium ions and also possesses a 5'-->3' exonuclease activity. The enzyme is highly purified and is free of non-specific endo or exo nucleases. Taq DNA polymerase leaves single 3'-dA nucleotide overhangs on their reaction product.

### UNIT DEFINITION :

One unit of Taq Polymerase activity is defined as the amount of enzyme required to incorporate 10nmoles of dNTP's into acid-insoluble DNA fraction in 30 minutes at 72°C.

**CONCENTRATION PROVIDED :** 5000 Units/ml i.e. 5 Units/ $\mu$ l

Storage Buffer : 10mM K-phosphate (pH 7.4), 0.1mM EDTA, 50% glycerol, 0.1% Triton X-100 and 0.1% Tween 20.

### CONTENTS OF THE PACK :

500 units of Taq DNA polymerase	50 $\mu$ l	- 2 Vials
10 X Reaction buffer	1.5 ml	- 1 Vial
25 mM MgCl <sub>2</sub>	1.5 ml	- 1 Vial
Mol. Grade water	1.5 ml	- 2 Vials

### 10X Reaction Buffer complete including Magnesium (2.5mM final 1x Conc.)

160mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 670mM Tris-HCL pH 8.8, 0.1% Tween-20 and 25mM MgCl<sub>2</sub>

**Mol grade water:** Water is supplied in 1.5ml x 2 quantity, which is RNase and DNase free.

**MgCl<sub>2</sub> Solution :** 1.5 ml of 25mM MgCl<sub>2</sub> Solution (In case higher Conc. of Mg is to be used)

**Storage Conditions :** Recommended storage temperature is -20 °C.

### OTHER PACK SIZE AVAILABLE:

Cat. No.	PRODUCT	Pack Size
110001	Taq DNA Polymerase	100 U
110002	Taq DNA Polymerase	250 U
110003	Taq DNA Polymerase	500 U (250 U x 2)
110004	Taq DNA Polymerase	1000 U (250 U x 4)
110005	Taq DNA Polymerase	10000 U (1000 U x 10)

### References:

1. Kaledin, A.S., Sliusarenko, A.G. and Gorodetskii, S.I. (1980) Biokhimiya 45, 644(Rus)
2. Innis, M.A. et al., Proc. Natl. Acad. Sci. USA 85, 9436 (1988)

**NOTE :** For research use only. Not for use in Diagnostic or therapeutic procedures.

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