

## Taq DNA Polymerase

Cat. No.	Pack Size	Conc.
EUA00103	500 U	5 U/μl
EUA00104	1000 U	5 U/μl
EUA00105	2500 U	5 U/μl

### Description:

Taq DNA Polymerase is a recombinant thermostable DNA polymerase that has been *purified* from the *cloned Thermus aquaticus DNA polymerase gene* expressed in *E. coli*.

Taq DNA polymerase has 5'→3' DNA synthesis activity but lacks the 3'→5' exonuclease activity.

### Reagents Provided:

- **Taq DNA Polymerase in Storage Buffer:** 20 mM Tris-HCl (pH 8.0), 1mM DTT, 0.1 mM EDTA, 100mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.
- **10x Reaction Buffer:** 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonidet P40.
- **10x Reaction Buffer with (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>:** 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.1% Tween 20.
- **25 mM MgCl<sub>2</sub> Solution.**

### Storage & Shipping:

Store at -20°C, shipping at room temperature.

### Quality data:

Activity and stability tested at 20, 30 and 40 cycles of PCR reactions at 95°C.

Tested for the absence of human DNA contamination by PCR with Alu-specific primers.

### Unit definition:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C.

### Recommended PCR reaction mix:

Component	Quantity
Taq (5 U/μl)	1.25-2.5 U
10x Reaction Buffer ( <b>or</b> with (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> )	5 μl (1x)
25 mM MgCl <sub>2</sub>	3-5 μl (1.5-2.5 mM)
10 mM dNTP mix	1 μl (200 μM)
Primer Forward	0.3 -1 μM
Primer Reverse	0.3 -1 μM
DNA template	1-100 ng/μl
H <sub>2</sub> O PCR grade	Up to 50 μl
<b>Total</b>	<b>50 μl</b>

### Recommended PCR cycles:

Cycle step	Temp.	Time	Cycles
Initial denaturation	95°C	3-5 min	1
Denaturation	95°C	30-60 s	26-35
Annealing	50-68°C	30-60 s	
Elongation	72°C	1-4 min	
Final elongation	72°C	5-10 min	1

**IMPORTANT:** Annealing temperature should be 2-6°C lower than the primer melting temperature.

### Safety warnings and precautions:

This product is designed for research purposes and *in vitro* use only. According to common laboratory safety practice, it is recommended to wear protective clothing, gloves and safety glasses.

*Some applications this product is used in may require a license which is not provided by the purchase of this product. Users should obtain the license if required.*