

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 (NH₄)₂SO₄:** 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM (NH₄)₂SO₄, 0.1% Tween20.
- **25 mM MgCl₂ 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 (or with (NH ₄) ₂ SO ₄)	5 μl (1x)
25 mM MgCl ₂	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 ₂ O PCR grade	Up to 50 μl
Total	50 μl

Recommended PCR cycles:

Cycle step	Temp.	Time	Cycle s
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.