



**The ENZYME Company**

## **TOP-Taq DNA polymerase**

**Description** TOP Taq DNA Polymerase is a novel genetically engineered version of Taq DNA polymerase. Special additives provide high robustness against inhibitors where other enzymes fail. Thereof it is more immune to inhibition by bio-molecules as polysaccharides, fats, proteins. Extra performance of the enzyme ensures superior sensitive and reliable amplification. The polymerase replicates DNA at 72 °C. It catalyzes the polymerization of nucleotides into duplex DNA in the 5'→3' direction in and a 5'→3' exonuclease activity.

**Applications** TOP Taq DNA polymerase is suitable for all regular but especially for applications where inhibitors decrease the performance of regular polymerases.

**Processivity** TOP Taq DNA polymerase effectively directs PCR with the template up to 5 kb in length.

**Sensitivity** of PCR reaction is high. As few as 6 DNA molecules were detected.

### **QC-Testing:**

- PCR with inhibitor-contaminated templates
- storage (7 days at room temperature) test – no change in performance
- absence of endonuclease and nickase activities
- PCR with various templates – human and bovine genomic DNA, Phage Lambda DNA;
- Exo-endo nucleases contamination tests;
- “no primers” test with Lambda DNA cycling without primers;
- “no template” test with the primers complementary to the conservative region of 16S bacterial ribosomal genes
- *Concentration* 5000 units/ml

**Unit definition** One unit of activity is the amount of enzyme required to incorporate 10 nmoles of dNTP into acid-insoluble DNA fraction in 30 minutes at 72°C.

**Storage buffer** 10 mM K-phosphate, pH 7.4, 0.1 mM EDTA, 50% glycerol, 0.1% Triton X-100, 0.1% Tween 20.

**Reaction buffer (x10) “incomplete”:** 160 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 670 mM TrisHCl pH 8.8, 0.1% Tween-20

**Reaction buffer (x10) “complete”:** 160 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 670 mM TrisHCl pH 8.8, 0.1% Tween-20, 25 mM MgCl<sub>2</sub>

**Reaction buffer (x10) “complete II KCl”:** 500 mM KCl, 100 mM TrisHCl pH 8.8, 0.1% Tween-20, 15 mM MgCl<sub>2</sub>

**Additionally provided:** 1 Tube MgCl<sub>2</sub> (100 mM)

**Recommended MgCl<sub>2</sub> concentration** 1.5 mM – 6 mM

**Storage condition** temperature is -20°C

V AS24.11.08

<b>Catalog #</b>	<b>conc.</b>	<b>Pack size</b>	<b>Price, Euro</b>
111105	5,0u/µl	500 u	99,00
111125	5,0u/µl	2500 u	409,00
111150	5,0u/µl	10000 u	1200,00
111175	5,0u/µl	50000 u	4000,00

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