

Products	Cat #	Pack Size
SupraTherm™ DNA Polymerase	GC-022-0250	250 u
SupraTherm™ DNA Polymerase	GC-022-0500	500 u
SupraTherm™ DNA Polymerase	GC-022-1000	1000 u
SupraTherm™ DNA Polymerase	GC-022-5000	5000 u

## DESCRIPTION

**SupraTherm™ DNA Polymerase** is a thermostable Taq DNA polymerase purified from the *Thermus aquaticus* strain by several rounds of liquid chromatography. The purity of SupraTherm™ Taq DNA Polymerase is more than 90% of the total protein in the preparation. Amplification of DNA fragments (100 bp to 5 kb) can be achieved with it. The enzyme has both, 5'-3' polymerase- and 5'-3'exonuclease activities. SupraTherm™ can add a single template-directed deoxyadenosin (A) residue to the 3' end of duplex PCR products and so allows easy and efficient ligation of PCR products in TA cloning vectors.

## APPLICATION

The enzyme may be used for **PCR, thermosequencing** and for other research and diagnostic applications. SupraTherm™ DNA Polymerase is the best enzyme for everyday routine applications. The enzyme has **limited application for PCR with low-abundance template** (less than 100 DNA molecules of template). Please use for PCR of low abundance templates and for other more sophisticated techniques BioTherm™ DNA Polymerase.

## CONCENTRATION

5 units/μl

## UNIT DEFINITION

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTPs into acid-insoluble form in 30 minutes at 72°C under the assay conditions (25 mM TAPS (tris-(hydroxy-methyl)-methyl-amino-propa-nesulfonic acid, sodium salt) pH 9.3 (at 25°C), 50 mM KCl, 2 mM MgCl<sub>2</sub>, 1 mM β-mercaptoethanol) and activated calf thymus DNA as substrate.

## STORAGE BUFFER

10 mM K-phosphate buffer pH 7.0, 100 mM NaCl, 0.5 mM EDTA, 1 mM DTT, 0.01% Tween 20;  
50% glycerol (v/v)

## 10 x REACTION BUFER

160 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 670 mM Tris-HCl pH 8.8 (at 25°C), 15 mM MgCl<sub>2</sub>, 0.1% Tween 20  
The 10x reaction buffer(on request with or without MgCl<sub>2</sub>) is delivered free of charge.

**Cat. No. GC-002-006** 1.5 ml 10x reaction buffer (contains 15 mM MgCl<sub>2</sub> )

**Cat. No. GC-002-007** 1.5 ml 10x reaction buffer without MgCl<sub>2</sub> plus 50 mM MgCl<sub>2</sub> separately