DATA QUALITY SHEET

SupraTherm DNA Polymerase

FOR RESEARCH USE ONLY

Cat. GC-002-0100, GC-002-0250, GC-002-0500 GC-002-1000, GC-002-5000

DESCRIPTION	SupraTherm™ DNA Polymerase is a thermostable DNA polymerase purified from the Thermus aquaticus strain by several rounds of liquid chromatography. The purity of SupraTherm™ DNA Polymerase is more then 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. This property allows easy and efficient ligation of PCR products in TA cloning vectors.
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 MgCl2, 1 mM ß-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).
REACTION BUFFER	Reaction buffer (10x): 160 mM $(NH_4)_2SO_4$, 670 mM Tris-HCl (pH 8,8 at 25°C), 15 mM $MgCl_2$, 0,1% Tween-20.
STORAGE TEMPERATURE	Store SupraTherm Polymerase below 0°C preferably at -20°C, in a constant temperature freezer.
QUALITY CONTROL	SupraTherm™ DNA Polymerase was tested for the absence of unspecific endo- and exonucIeases activities.
SHELF LIFE	2 years from date of receipt under proper storage conditions.
FUNCTIONAL ANALYSIS	Tested functionally in a unit activity test.