

Products	Cat #	Pack Size
BioTherm™ Taq DNA Polymerase	GC-002-0250	250 u
BioTherm™ Taq DNA Polymerase	GC-002-0500	500 u
BioTherm™ Taq DNA Polymerase	GC-002-1000	1000 u
BioTherm™ Taq DNA Polymerase	GC-002-5000	5000 u

DESCRIPTION

BioTherm™ DNA polymerase is a thermostable Taq DNA polymerase purified from the *Thermus aquaticus* strain. Amplification of DNA fragments (**100 bp to 7 kb**) can be achieved with this enzyme. The enzyme has both 5'-3' polymerase- and 5'-3' exonuclease activities. BioTherm™ can add a single template-directed deoxyadenosin (A) residue to the 3' end of duplex PCR products.

CONCENTRATION

5 units/μl

UNIT DEFINITION

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTPs into acidinsoluble form in 30 minutes at 72°C under the assay conditions (25 mM TAPS (tris-(hydroxy-methyl)-methyl-amino-propanesulfonic acid, sodium salt) pH 9.3 (at 25°C); 50 mM KCl; 2 mM MgCl₂; 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)

STORAGE TEMPERATURE

Store BioTherm™ DNA polymerase below 0°C, preferably at -20°C, in a constant temperature freezer.

10 x REACTION BUFER

160 mM (NH₄)₂SO₄, 670 mM Tris-HCl pH 8.8 (at 25°C), 15 mM MgCl₂, 0.1% Tween 20

Cat. No. GC-002-006 1.5 ml 10x reaction buffer (contains 15 mM MgCl₂)

Cat. No. GC-002-007 1.5 ml 10x react. buff. without MgCl₂ plus 50 mM MgCl₂ separately

AMPLIFICATION CONDITIONS

10x reaction buffer	3 μl	<div style="border: 1px solid red; padding: 5px; display: inline-block;"> 58°C 0.5 min 72°C 4 min 93°C 20 sec 30 cycles </div>
dNTPs (200 μM each)	5 μl	
human genomic DNA (300-600 ng)	1 μl	
forward primer (25 pM)	2 μl	
reverse primer (25 pM)	2 μl	
BioTherm™ (0.2-1 units/μl)	1 μl	
H ₂ O	16 μl	
total	30 μl	