

Products	Cat #	Pack Size
BioThermBio™ Taq DNA Polymerase	GC-057-0250	250 u
BioThermBio™ Taq DNA Polymerase	GC-057-0500	500 u
BioThermBio™ Taq DNA Polymerase	GC-057-1000	1000 u

DESCRIPTION

BioThermBio™ is a novel thermostable DNA polymerase that **dramatically improves incorporation of Biotin- and Digoxigenin-dUTP** as compared to Taq 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-pro-panesulfonic 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 BioThermBio™ 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

The 10x reaction buffer (on request with or without MgCl₂) is delivered free of charge.

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

Cat. No. **GC-002-007** 1.5 ml 10x reaction buffer without MgCl₂ plus 50 mM MgCl₂ separately

ASSOCIATED ACTIVITIES

Endonuclease- and exonuclease activities were not detectable after 2 and 1 hours incubation, respectively, of 1 μg lambda DNA and 0.22 μg of EcoRI digested lambda DNA, respectively, at 72°C in the presence of 15 - 20 units of BioTherm™ DNA polymerase.

Biotine-11-dUTP labelling of PCR DNA fragment (650 bp) by thermophilic DNA polymerases.

Lane 1 Amplification by Taq polymerase, dNTPs 200mM each, no Biotine-11-dUTP

Lane 2 Amplification by Taq polymerase, dATP, dGTP, dCTP 200 mM each, dTTP 130 mM, Biotin-11-dUTP 70 mM.

Lane 3 Amplification by NEW polymerase BioTherm-Bio, dATP, dGTP, dCTP 200 mM each, dTTP 130 mM, Biotin-11-dUTP 70 mM. Analysis with streptavidin/-alcalic phosphatase conjugates shows that specific incorporation of Biotin-11-dUTP was 20 times higher with NEW polymerase.

