DATA QUALITY SHEET

GENECRAFT®

BioThermRed DNA Polymerase

FOR RESEARCH USE ONLY

Cat. GC-021-0100, GC-021-0250, GC-021-0500, GC-021-1000, GC-021-5000

DESCRIPTION

BioThermRed™ DNA polymerase is a mixture of BioTherm™ DNA polymerase and red pigment that works like BioTherm™. After addition of BioThermRed™ a thin red layer on the bottom of the tube appears. So you have a visible pipetting control. Furthermore you can see, if your reaction is already mixed, when the color of your reaction becomes uniform.

CONCENTRATION

5 units/µl.

UNIT DEFINITION

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTP's into acid-insoluble form in 30 minutes at 72°C under the assay conditions (25 mM TAPS (tris-(hydroxymethyl)-methyl-amino-propanesulfonic acid, sodium salt) pH 9.3 (at 25°C); 50 mM KCl; 2 mM $MgCl_2$; 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, 0.2% indicator red dye, 50% glycerol (v/v). The 10x reaction buffer (on request with or without $MgCl_2$) is delivered free of charge.

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.
1.5 ml 10x reaction buffer (contains 15 mM $MgCl_2$) Cat. No. GC-002-006
1.5 ml 10x reaction buffer without $MgCl_2$ plus 50 mM $MgCl_2$ separately
Cat. No. GC-002-007

STORAGE TEMPERATURE

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

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 Polymerase.

FUNCTIONAL ANALYSIS

Tested functionally in a unit activity test.