

## AccuTherm™ (Pfu) DNA Polymerase

Products	Cat #	Pack Size
AccuTherm™ Pfu DNA Polymerase	GC-004-0250	250 u
AccuTherm™ Pfu DNA Polymerase	GC-004-0500	500 u

### DESCRIPTION

**AccuTherm™** is a thermostable enzyme possessing 5'-3' DNA polymerase and **3'-5' proof reading** exonuclease activities. It is isolated from the hyperthermophilic marine archae *Pyrococcus furiosus* (Pfu). **AccuTherm™** provides **extremely high fidelity**. Whereas the enzyme is not able to amplify long fragments as efficiently as BioTherm™ or KlenTherm™ because of its very high exonuclease activity, a mixture of either KlenTherm™ or BioTherm™ with AccuTherm™ provides more robust synthesis of longer amplification products.

### 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-(hydroxymethyl)methyl-amino-propane-sulphonic 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)

### STORAGE TEMPERATURE

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

### 5 x REACTION BUFFER

83 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> , 350 mM Tris-HCl pH 8.8 (at 25°C), 22 mM MgCl<sub>2</sub> , 0,75% Triton X100, 100 mM KCl