

## DATA QUALITY SHEET



### **KlenThermPlatinum™ DNA Polymerase**

*FOR RESEARCH USE ONLY*

*Cat. GC-046-0100, GC-046-0250, GC-046-0500, GC-046-1000, GC-046-5000*

#### **DESCRIPTION**

KlenThermPlatinum™ DNA polymerase is a modified form of KlenTherm™ DNA polymerase, that offers excellent specificity. It is designed for PCR with difficult templates such as GC-rich fragments and microsatellites. KlenThermPlatinum™ is particularly well suited to primer extension of Single Nucleotide Polymorphism (SNP) markers. KlenThermPlatinum™ maintains excellent specificity and minimal background even in conditions designed for high yield (high  $Mg^{2+}$  /primer concentrations). In fact, even on genomic templates, the enzyme can be used with  **$MgCl^{2+}$  concentrations as high as 10mM.**

KlenThermPlatinum™ has an extremely low signal/noise ratio. In addition, it has an extremely high recognition of base mis-matches which results in a very low rate of mismatch extension. KlenThermPlatinum™ is capable of extending through difficult regions, e.g. regions, which include inverted tandem repeats and those with high amounts of secondary structure

#### **CONCENTRATION**

10 units/ $\mu$ l

#### **UNIT DEFINITION**

One unit is defined as the amount of enzyme, that incorporates 10 nmoles of dNTP into acid-insoluble form in 30 min at 73°C under the assay conditions (25 mM TAPS pH 9.3 at 25°C, 50 mM KCl, 2 mM  $MgCl_2$ , 1 mM  $\beta$ -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**

500 mM KCl, 100 mM Tris-HCl (pH 9 at 25°C), 1% Triton X100  
Extra solution: 50 mM  $MgCl_2$ , add  $MgCl_2$  to a final concentration of 3.5 mM.  
Please note the difference between KlenTherm and BioTherm reaction buffers.

#### **STORAGE TEMPERATURE**

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

#### **APPLICATION**

PCR requiring high specificity  
PCR with GC-rich regions or repeats (e.g. microsatellites)

#### **FUNCTIONAL ANALYSIS**

Tested functionally in a unit activity test.