KlenThermPlatinum™ DNA Polymerase

Products	Cat #	Pack Size
KlenThermPlatinum™ DNA Polymerase	GC-046-0250	250 u
KlenThermPlatinum™ DNA Polymerase	GC-046-0500	500 u
KlenThermPlatinum™ DNA Polymerase	GC-046-1000	1000 u

DESCRIPTION

KlenThermPlatinum™ DNA polymerase is a modified form of KlenThermTM DNA polymerase, that offers excel-lent 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 10 mM**.

KlenThermPlatinum™ has an **extrem** low signal/noise ratio. In addition, it has an **extremely high recognition** of base mis-matches which results in a very low rate of mis-match 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.

KlenThermPlatinum™ works in a totally unique way, involving improved nucleotide selection at the active site, and a much lower rate of mis-match extension, meaning that only perfectly aligned primers will be extended. As a result, the enzyme can give even **higher specificity than Hot-Start** (manual or automatic) techniques without the need for inconvenient pre-incubation steps.

KlenThermPlatinum™ has a **very weak terminal transferase activity**, and products can be assumed to be blunt-ended. However, this is sequence dependent, and some sequences may be tailed with a single nucleotide.

APPLICATION

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

CONCENTRATION AND STORAGE TEMPERATURE

10 units/µl , -20°C

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 .-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

10 x REACTION BUFER

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.
- 1.5 ml 10x reaction buffer **Cat. No GC-001-006**

Ecoli s.r.o., Studenohorská 12, 841 03 Bratislava 47, Slovenská republika, IČO: 35815906, IČ DPH: SK2020224668 *tel: 02/646789336 fax: 02/64789040 mobil: 0903 160 701, e-mail: ecoli@inethome.sk, www.ecoli.sk*