LaboPass™ IP-*Taq* DNA polymerase

Cat. No. CMT1002

COSMO GENETECH

Lot No.

Contents

IP-*Taq* DNA Polymerase (2.5 U/μl)	250 U X 2
10X IP-*Taq* Buffer I	1 ml X 2
10X IP-*Taq* Buffer II	1 ml
5X Tuning Buffer	1 ml
dNTPs (Each 2.5 mM)	0.5 ml X 2

Store at -20˚C

Description

Labopass™ IP-*Taq* DNA Polymerase is a thermostable DNA polymerase cloned from *Thermus aquaticus* and a recombinant form expressed in E.coli. This enzyme possesses 5' to 3' exonuclease activity, but lacks a 3' to 5' exonuclease proofreading activity. The enzyme purified with high purity contains a very low level of contaminating *E.coli* DNA, which minimizes false-positive results, especially when the amplicon is bacterial sequence (e.g. 16S rRNA).

Applications

- General PCR for detection
- Colony PCR
- Real-time PCR
- A-tailing for TA-cloning

Unit definition

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTPs into acid-insoluble form in 30 min at 72˚C.

Storage buffer

20 mM Tris-HCl (pH8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 0.5% Tween-20, 0.5 % NP-40, 50 % glycerol

Purity

Nicking, endonuclease and exonuclease activity were not detected after the incubation of 0.5 μg of supercoiled pUC19, λDNA or HindIII digested λDNA with 10 units of this enzyme for 4 hour at 37˚C or 72˚C.

10X IP-*Taq* buffer I and II (with $MgCl_2$)

Labopass™ IP-*Taq* DNA Polymerase is supplied with two types of reaction buffer with different salt formulation. Generally, Buffer I works well in most PCR reaction. The use of Buffer II can be tried if PCR products are not satisfactory (nonspecific, little or no products) using Buffer I.

5X Tuning buffer

Tuning buffer can improve PCR efficiency in reaction using problematic template DNA containing high GC contents or stable secondary structure. Thus, it is advantageous to amplify complicated long target sequences.

Standard reaction (50 μl)

Components	Volumes (μl)
10X IP-*Taq* Buffer I or II	5 μl
dNTPs (Each 2.5 mM)	4 μl
5X Tuning buffer	10 μl (optional)
Forward Primer	10 ~ 50 pmoles
Reverse Primer	10 ~ 50 pmoles
DNA Template	variable *
LaboPass™ IP-*Taq* DNA Polymerase	0.5 ~ 2 units
Distilled water	up to 50 μl

*** Amount of DNA template**

- Eukaryotic genomic DNA	10-200 ng
- Prokaryotic genomic DNA	1-50 ng
- Purified homogeneous DNA (e.g. plasmid, lambda DNA. etc)	<5 ng

For laboratory use only

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