Foreasy Taq DNA Polymerase

HotStar Taq for PCR/qPCR

Product Introduction

Foreasy Taq DNA Polymerase is a new Taq enzyme expressed in Escherichia coli engineering bacteria by gene recombination technology. The enzyme itself has a certain hot-start activity and can be used for conventional PCR and qPCR; it has 5'→3' DNA polymerase activity and 5'→3' exonuclease activity, but no 3'→5' exonuclease activity.

Component

Component	IM-01011	IM-01012	IM-01013
Foreasy Taq DNA Polymerase (5 U/μL)	5000 U (1 mL)	50 KU (10 mL)	500 KU (100 mL)
2× Taq Reaction Buffer	25 mL ×5	250 mL ×5	500 mL ×25

Storage

-20 ± 5 °C for 2 years or at -80 °C for long-term storage.

Features

High specificity: The enzyme has a certain hot-start activity.

Fast Amplification: 10 sec/kb .

Highly adaptable template: can be used to efficiently amplify GC High value, various difficult-to-amplify DNA template.

Strong fidelity: ordinary Taq Enzyme 6 times.

Strong thermal stability: It can be placed at 37 °C for a week and maintains more than 90% activity

Application

Various PCR/qPCR systems and direct PCR systems
PCR amplification of DNA fragments
DNA labeling
DNA sequencing
PCR A-tailed

U Definition

1U: The amount of enzyme required to incorporate 10 nmol of deoxynucleotides into acid-insoluble matter using activated salmon sperm DNA as template/primer for 30 minutes at 74°C.

Activity Assay Conditions

1× Taq Reaction Buffer，1.5 mM $MgCl_2$；0.2 mg/mL activated calf thymus DNA，0.2 mM dNTPs。

Storage

20 mM Tris-HCl (pH 8.0)，1 mM DTT，0.1 mM EDTA，50% glycerol，stabilizer。

2× Taq Reaction Buffer

Contains optimized ratios of Tris, KCl, MgCl2 and other ingredients.

Instance Reaction Protocol

Template DNA	X μL
dNTPs (10 mM each)	1 μL
Primer-F	1 μL
Primer-R	1 μL
ddH_2O	To 50 μL
Total Volume	50 μL

Reaction Condition

Temperature	Time	Cycle
37°C	5mins	1
94°C	5mins	1
94°C	10 Secs	35
60°C	10 Secs	
72°C	20 sec/kb	
72°C	2mins	1

Note: For 10 μL and 20 μL systems, add an equal volume of mineral oil if the thermal cycler does not have a heated lid.
PCR reaction conditions vary depending on the structural conditions of templates, primers, etc. In the specific operation ,it is necessary to design the optimal reaction conditions including the annealing temperature, extension time and so on , which is according to the different template type, the size of the target fragment, the base sequence of the amplified fragment, and the GC content and length of the primer.