HiFi Taq DNA Polymerase

For research use only

Catalogue Numbers: HT020, HT050

Quantity: 20 U, 500 U

High Fidelity: high specificity, sensitivity, accuracy, and yield

Amplification: long targets (up to 6 kb) from genomic DNA

Unit Definition: 1 unit incorporates 10 nmol of dNTPs into acid-insoluble material in 30 minutes at 72ºC

Storage Buffer: 50 mM Tris-HCl (pH9.0), 100 mM NaCl, 0.1 mM EDTA, 1% Triton X-100, 5 mM DTT, 50% Glycerol, Stabilizers

10X PCR Buffer: 100 mM KCl, 20 mM $MgSO_4 \cdot 7H_2O$, 200 mM Tris-HCl (pH8.8), 1% Triton X-100, 100 mM $(NH_4)_2SO_4$, 1 mg/ml BSA

Storage: -20ºC for extended periods

3' to 5' Exonuclease Poofreading Abiliy: YES

Introduction

HiFi Taq DNA Polymerase is a blend of recombinant Pfu and recombinant Taq DNA Polymerase with an efficient proofreading 3' to 5' exonuclease activity for improved PCR. This enzyme mixture greatly increases fidelity and amplification of genomic targets up to 6 kb with high specificity, sensitivity, accuracy, and yield. dUTP, dITP and primers containing these nucleotides will hinder DNA synthesis and should not be used in PCR.

Quality Control

HiFi Taq DNA Polymerase is tested on a lot-to-lot basis using PCR to ensure consistent amplification of genomic targets.

Caution

During the procedure, always wear a lab coat, disposable gloves, and protective goggles

Components

Name	HT020	HT050
HiFi Taq DNA Polymerase	4 µl	100 µl
10X PCR Buffer	80 µl	2 ml

General PCR Reaction Set Up

All reaction components should be prepared on ice or in a biocooler then quickly transferred to a thermal cycler pre-heated to 94ºC. For added convenience and to prevent pipetting errors, combine the reaction components in a PCR master mix then aliquot several reactions in parallel PCR tubes. Storage Buffer contains 50% Glycerol so HiFi Taq DNA Polymerase does not require thawing when removed from -20ºC storage.

1. Allow components to thaw then vortex gently and spin down.
2. Remove HiFi Taq DNA Polymerase from -20ºC storage and spin down.
3. Add the following components to a PCR tube or tubes.

Reaction Component	Volume	Final Concentration
Primer Set, F/R (10 µM each)	1 µl	0.2 µM
10X PCR Buffer	5 µl	1X
dNTP Mix (10 mM each)	0.5 µl	100 µM
HiFi Taq DNA Polymerase	0.25 µl	1.25 U
Template DNA	0.5-10 µl	<500 ng
ddH_2O	To 50 µl	

4. Proceed to thermal cycling program on page 2.

PCR Program Reference (Based on Experimental Condition)

Please read the entire instruction manual prior to starting the thermal cycling program.

Initial Step	35 Cycles			Final Extension
Hold at 95ºC for 1 minute				Hold at 72ºC for 7 minutes
	95ºC for 30 seconds	55ºC for 30 seconds	72ºC for 1 minute/kb	

Related PCR Products

PCR		
Product	Package Size	Catalogue Number
Ultra-Pure Taq DNA Polymerase	500/2500 U	UT050/250
Ultra-Pure Taq DNA Polymerase w/ dNTPs	500/2500 U	UTN050/250
Ultra-Pure Taq DNA Polymerase 1.1	500/2500 U	UT0501/2501
Ultra-Pure Taq DNA Polymerase 1.1 w/ dNTPs	500/2500 U	UTN0501/2501
Ultra-Pure Taq DNA Polymerase 1.2	500/2500 U	UT0502/2502
Ultra-Pure Taq DNA Polymerase 1.2 w/ dNTPs	500/2500 U	UTN0502/2502
HiFi Taq DNA Polymerase	500 U	HT050
Ultra-Pure Taq PCR Master Mix	200/400 rxns	UTM200/400
Ultra-Pure Taq PCR Master Mix with Dye	100 rxns	TQMD100
dNTP Solution	10 mM each, 200 µl	DN200
dNTP Solution	25 mM each, 1 ml	DN1100
dNTP Set	100 mM 1 ml x 4	DN4400
dCTP	100 mM, 1 ml	DC1000
dATP	100 mM, 1 ml	DA1000
dGTP	100 mM, 1 ml	DG1000
dTTP	100 mM, 1 ml	DT1000