NANOHELIX
Reliable Partner for DNA Technologies

Ver. 2307-02

HelixAmp™ DNA-free *Hot-Taq* Polymerase

Kit Contents

HelixAmp™ DNA-free *Hot-Taq* Polymerase		
Cat. No.	**DFHT125 / DFHT125N (125units)**	**DFHT250 / DFHT250N (250units)**
DNA-free *Hot-Taq* (2.5unit/μl)	0.05ml	0.1ml
10x DF Hot-Taq Buffer	0.5ml	1ml
dNTP Mix (each 10mM)	None / 0.1ml	None / 0.2ml
5x TuneUp™ Solution	None / 0.25ml	None / 0.5ml
6x Loading Dye	0.25ml	0.5ml
Instructions for Use	1ea	1ea

Description

HelixAmp™ DNA-free *Hot-Taq* Polymerase is a recombinant enzyme expressed and purified from a bacteria host cell harboring *Thermus aquaticus* DNA polymerase gene and purified using a process that minimizes level of contaminating host DNA. HelixAmp™ DNA-free *Hot-Taq* Polymerase is a chemically-modified form of purified DNA-free *Taq* DNA polymerase and quite suitable for high-specific hot-start PCR, real-time PCR and multiplex PCR. Because the contaminating host genomic DNA can cause the false positive result, use of DNA-free *Hot-Taq* polymerase is very important in PCR detection of bacteria with universal primers (e.g. Primers targeting 16s rRNA gene).

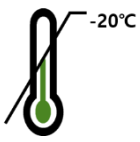
Application

Hot-Start PCR
Real-Time PCR
Genotyping
Multiplex PCR

Storage buffer

20mM Tris-HCl (pH 9.0), 100mM KCl,
0.1mM EDTA, 1mM DTT, stabilizers,
50% Glycerol

Storage



Store below -20℃

Shelf life

24 months

Concentration

2.5unit/μl

NanoHelix Co., Ltd.

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Quality Control

By Nanohelix's ISO 13485-certified quality management system, each lot of **HelixAmp™ DNA-free *Hot-Taq* Polymerase** was tested against predetermined specifications to ensure consistent product quality.

Protocol

※ Although precipitates could be arised in the 10x Buffer, they will not affect the enzyme activities

1. Recommended amount of template DNA

Human genomic DNA : 10 ~ 100ng

Bacterial genomic DNA : 5 ~ 50ng

Purified plasmid or phage DNA : 1 ~ 5ng

2. Mix following components in a PCR tube

Components	Volumes (µl)
Template	X µl
10x DF Hot-Taq Buffer	5µl
dNTP Mix (each 10mM)	1µl
Forward Primer (10pmoles/µl)	2µl
Reverse Primer (10pmoles/µl)	2µl
5x TuneUp™ Solution	0 ~ 20µl
DNA-free *Hot-Taq*	1.25units
RNase-free Water	to 50µl

※ **TuneUp™ Solution** is an additive altering the binding behavior of primer and template and can help the amplification that do not work well under standard PCR condition. Especially, **TuneUp™ Solution** can be used for the amplification of problematic template, such as high G+C content and repeat sequence regions. **TuneUp™ Solution** uses as adding into PCR reaction mixture from 0.5x to 2x.

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3. PCR condition

Temperature & time	Cycles
95℃, 15 min	x 1
95℃, 20 sec	x 25 ~ 40
Annealing Temp., 40 sec	
72℃, 1 min/kb (Expected size of product)	
72℃, 5 min	x 1

Annealing Temp. = T_m – (6 ~ 8℃)

T_m (Melting Temp.) = [4℃ x (G + C)] + [2℃ x (A + T)]

Products

Cat. No.	Products	Size
DFHT125	HelixAmp™ DNA-free *Hot-Taq* Polymerase	125units
DFHT125N	HelixAmp™ DNA-free *Hot-Taq* Polymerase (with dNTP)	125units
DFHT250	HelixAmp™ DNA-free *Hot-Taq* Polymerase	250units
DFHT250N	HelixAmp™ DNA-free *Hot-Taq* Polymerase (with dNTP)	250units

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