NanoTaq Hot-Start DNA Polymerase

11 NOV 2024

Catalog Number	Size	Concentration
DP001-0100	500 units	5 units/µl

Storage Conditions

Stable for up to 1 years at -20°C

Description

Bio-Helix NanoTaq, is an enhanced hot start enzyme DNA Polymerase engineered with nano technology, which differentiates from the traditional methods of hot start enzymes. It provides the convenience and reliability towards your research destination. NanoTaq covers reactions at room temperature and cycling conditions (using same protocol) as the conventional Taq as well as reducing nonspecific primer annealing, improving product yield and ideal for PCR products application of up to 5kb.

Kit Content(s)

NanoTaq Hot-Start DNA Polymerase	100 µl x 1 vial
10X PCR buffer	1,250 µl x 1 vial

Required materials but not provided

- A compatible PCR instruments
- Vortex or equivalent
- Microcentrifuge
- Plates and seals for your instruments

Reaction Setup

1. For each 20 µl reaction, assemble the following in a 0.2 ml PCR tube on ice just prior to use:

	Volume	Final Conc.
DNA template	- µl	3 ng
Forward primer, 5-10 µM	- µl	0.1-0.5 µM
Reverse primer, 5-10 µM	- µl	0.1-0.5 µM
dNTP Mix (10 mM each dATP, dCTP, dGTP, dTTP)	0.4 µl	200 µM
10X PCR buffer	2 µl	-
NanoTaq Hot-Start DNA Polymerase	1 µl	-
PCR Grade Water	Add to 20 µl	-
Total volume	20 µl	-

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2. Mix gently. If necessary, centrifuge briefly and cap tubes.
3. Place them into Thermocycler and process for 30-35 cycles as follows:

Initial Denaturation	3 min at 95°C	
Denaturation	30 sec	30-35 cycles
Annealing	30 sec at the proper annealing temperature	
Extension	1 min at 72°C	
Final extension	5 min at 72°C	

Note: Optimal conditions for amplification will vary depending on the primers and thermal cycler used. It may be necessary to optimize the system for individual primers, template, and thermal cycler.

Template

Purified high quality DNA is needed for a success PCR reaction. The final concentration of cDNA template please refer to "Reaction Setup".

Storage Buffer

The enzyme is supplied in a storage buffer consisting of 20 mM Tris-HCl (pH 8.0), 0.1 mM EDTA, 1 mM DTT, 50% (v/v) glycerol, and 1% Triton X-100.

Unit Definition

One unit is defined as the amount of enzyme that will catalyze the incorporation of 10 nmol of dNTP into acid- insoluble form in 30 min at 74°C in a reaction containing 25 mM TAPS (tris-[hydroxymethyl]-methyl-amino- propane-sulfonic acid, sodium salt), pH 9.3 at 25°C, 50 mM KCl, 2 mM MgCl2, 1 mM β-mercaptoethanol, 0.2 mM dATP, dGTP, and dTTP, 0.1 µM [α-32P] dCTP, and activated salmon sperm DNA.

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