CROYEZ

PRODUCT INFORMATION

Hot Start Taq DNA Polymerase (Glycerol-Free)

v. 230101

Catalog number

C15030-500U / C15030-1000U

Set package

Cat.	Name	Amount
C15030-500U	Hot Start Taq DNA Polymerase (Glycerol-Free) (5 U/μL)	500 U
	10X Hot Start Taq Buffer (Mg2+ free)	1 mL
	25 mM $MgCl_2$	1 mL
C15030-1000U	Hot Start Taq DNA Polymerase (Glycerol-Free) (5 U/μL)	1,000 U
	10X Hot Start Taq Buffer (Mg2+ free)	2 X 1 mL
	25 mM $MgCl_2$	2 X 1 mL

Description

Croyez Hot Start Taq DNA Polymerase contains Taq DNA Polymerase and an anti-taq monoclonal antibody which blocks polymerase activity. Enzyme activity is recovered during the initial incubation step while the taq antibody is denatured and dissociates from the DNA polymerase. Hot Start Taq DNA Polymerase exhibits higher specificity, sensitivity, and yield by reducing non-specific amplification and primer-dimers. This enzyme possesses 5'→3' polymerase activity and 5'→3' exonuclease replacement activity, but lacks a 3'→5' exonuclease (proof-reading) activity. Hot Start Taq DNA Polymerase is suitable for most PCR applications.
The enzyme formulation does not contain glycerol and is compatible for further lyophilization process.

Purity

>98% as determined by SDS-PAGE analysis.

Unit Definition

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 74°C.

Storage

Stored at -20°C. Avoid repeated freeze/thaw cycles.

Manuel

The following procedure is a general guideline for qPCR reaction. To maintain an RNase-free environment, always wear disposable gloves, and use laboratory consumables and water of nuclease-free grade during the whole experiment course.

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PCR reaction set-up:

1. Place all required reagents **on ice.**

Component	Amount	Final concentration
10X Hot Start Taq Buffer (Mg^{2+} free)	5 μL	1X
10 mM dNTPs	1 μL	0.2 mM each
Forward primer (10 μM)	1 - 5 μL	0.2 – 1 μM
Reverse primer (10 μM)	1 - 5 μL	0.2 – 1 μM
25 mM $MgCl_2$	2 – 8 μL	1 – 4 μM
Template DNA	X μL	≦ 1 μg
Hot Start Taq DNA Polymerase (Glycerol-Free)	0.25–0.5 μL	1.25 – 2.5 U
Nuclease-Free H_2O	Y μL	-
Total reaction volume	50 μL	-

* See Usage Notes for additional guidelines on primer/template preparation.

2. Gently mix the reaction thoroughly to achieve uniform distribution and briefly centrifuge.

3. Thermal cycling conditions for standard PCR.

Step	Cycles	Temperature	Time
Initial denaturation / Enzyme activation	1	95°C	5 min
Denaturation	35-50	95°C	10–20 sec
Annealing/Extension		60°C	20–60 sec

Notes

Primer concentration

To obtain optimal condition, primer concentration can be titrated between 0.2 – 1 μM.

Annealing/Extension optimization

To obtain optimal condition, annealing/extension temperature can be adjusted between 55°C – 65°C, annealing/extension time can be extended up to 60 sec.

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