

### ★ Storage

Store at -20°C.

Repeated freeze-thaw cycles should be avoided as they will cause a decrease in enzyme performance. Enzyme should never be stored in a frost freezer, since this type of freezer repeatedly goes through defrost cycles that expose enzyme to freezing and thawing.

### ★ Contents

- Product Manual
- Taq DNA Polymerase, 5 unit/ul
- 10X PCR Reaction Buffer

ALL PRODUCTS SOLD BY GenDEPOT ARE INTENDED FOR RESEARCH USE ONLY UNLESS OTHERWISE INDICATED. THIS PRODUCT IS NOT INTENDED FOR DIAGNOSTIC OR DRUG PURPOSE

### ★ Shipping condition

Ship with ice pack and dry ice.

### ★ Introduction

Taq DNA Polymerase is the industry standard for routine PCR. Taq with 10X PCR Buffer is available in economical extra-large pack sizes. GenDEPOT provides high quality recombinant Taq at an exceptional value. Taq DNA Polymerase is a thermostable DNA Polymerase that possesses a 5'→3' polymerase activity and a 5' flap endonuclease activity. GenDEPOT has developed a uniquely efficient, automated manufacturing and purification process. We are therefore able to offer large quantities of highly purified enzyme at previously unheard of prices. GenDEPOT's Taq Polymerase Ultrapure is free from DNA, DNase and pyrogens, and guaranteed to deliver the most sensitive and reliable PCR experience possible.

### ★ Source

An *E. coli* strain that carries the cloned Taq gene from *E. coli*

### ★ Supplies In

10 mM Tris-HCl, 100mM KCl, 1mM DTT, 0.1mM EDTA, 0.5% EDTA, 30% glycerol, pH 7.4 @25 °C.

### ★ 10X PCR Reaction Buffer

100mM Tris-HCl, 50mM KCl, 20mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.5% NP-40, pH 8.8@ 25°C.

### ★ Unit Definition

One unit is defined as the amount of enzyme that will incorporate 15nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.

### ★ PCR Master Mix Preparation

Components	25ul reaction	Final conc(1X)
10X PCR Reaction Buffer	2.5ul	1X
10mM dNTPs	0.5ul	200 uM
10uM Forward primer	0.5ul	0.2uM (0.05-0.1uM)
10uM Reverse primer	0.5ul	0.2uM (0.05-0.1uM)
Template DNA	1-5ul	< 1.0ug
Taq DNA Polymerase	0.25ul	1.25 units (0.8-2 units)
Water, PCR Certified	Up to 25ul	

**Notes:** If necessary, the reaction mixture can be overlaid with mineral oil or paraffin (melting temperature 50-60°C) of special PCR grade. One-half of the total reaction volume is usually sufficient.

### ★ PCR Reaction Thermocycling

Step	Temp	Time	Cycle
Initial denaturation	95°C	30 sec	1
Denaturation	95°C	15-30 sec	30
Annealing	Primer T <sub>m</sub> -5°C	30-60 sec	
Extension	72°C	1 min/kb	
Final Extension	72°C	5 min	1
Hold	4°C		

### ★ Related Products

Product Name	Cat No
Agarose Sepro	A0224
100bp PCR Ranger DNA Marker, 100bp-To-30kb	D1108
1kb PCR Ranger DNA Marker, 75bp-to-20kb	D1109
iVDye 50bp DNA Ladder	V1001
iVDye 100bp DNA Ladder	V1002
iVDye 1kb DNA Ladder	V1003
dNTP Mixtures, 10mM Each	D0610
<b>amfiSure</b> PCR Master Mix (2X)	P0311
<b>amfiSure</b> Primer PCR Master Mix (2X)	P1311
<b>amfiSure</b> PCR Master Mix (2X)	P2311
SafePinky DNA Gel Staining Solution	S1001