QKGEN® Taq DNA Polymerase for PAGE

Product description

QKGEN® Taq DNA Polymerase for PAGE is purified from E.coli expressing a cloned DNA polymerase from Thermus aquaticus. The enzyme consists of a single polypeptide with a molecular weight of approximately 94kDa. This enzyme has 5'-3' DNA polymerase activity and 5'-3' exonuclease activity, but lacks 3'-5' exonuclease activity. This enzyme is supplied with unique buffer, and its PCR product is suitable for SDS-PAGE and agarose gel electrophoresis.

Highlights

·Extension rate is about 1-2 kb/min.

·Unique buffer system compatible with PAGE.

·Template-independent "A" can be generated at the 3'end of the PCR product. PCR products can be directly cloned into pEASY-T vectors.

·Amplification of genomic DNA fragment up to 3 kb.

Unit Definition

One unit of Taq DNA Polymerase for PAGE incorporates 10 nmol of deoxyribonucleotide into acid-precipitable material in 30 minutes at 74℃.

Quality Control

Taq DNA Polymerase for PAGE has passed the following quality control assays:

functional absence of double-and single-strand endonuclease activity; >99%homogeneous measured by SDS-PAGE.

Each batch of Taq DNA Polymerase for PAGE has been assayed for amplification efficiency to amplify p53 gene from 10ng of human genomic DNA.

Storage Buffer

20 mM Tris-HCl(pH 8.0), 0.1 mM EDTA, 1 mM DTT, 100 mM KCl, 50% glycerol, stabilizers.

Specifications

Name	Cat. No.	QAP112-1	QAP112-2
QKGEN® Taq DNA Polymerase for PAGE	Size	2500U	10000U

Components

Name	QAP111-1	QAP111-2
Taq DNA Polymerase for PAGE (5 U/μL)	2500U	2500U × 4
10 × Taq Buffer for PAGE	1.2 mL × 5	1.2mL × 20
2.5mM dNTPs	800 μL × 5	800 μL × 20
6 × DNA Loading Buffer	1 mL	1 mL × 4

[Note] 10×Taq Buffer for PAGE (with Mg^{2+}): 200 mM Tris-HCl(pH 8.3), 200 mM KCl, 100 mM$(NH_4)_2SO_4$, 20 mM $MgSO_4$,others

Storage

This product should be stored at -25~-15℃ for 2 years.

Application

Short fragment PCR

Recommended PCR reaction system

1.PCR reaction system

Components	Volume(μL)	Final concentration
10× Taq Buffer for PAGE	5	1×
Taq DNA Polymerase for PAGE (5 U/μL)	0.5-1	2.5-5U
Forward Primer(10 μmol/L)	1	0.2 μmol/L
Reverse Primer(10 μmol/L)	1	0.2 μmol/L
2.5mM dNTPs	4	0.2 mM
DNA	X	-
ddH_2O	up to 50	

[Note]:

1) A final concentration of 2mM $MgSO_4$ is sufficient for most targets amplification. For some targets, more Mg^{2+} may be required. For optinal results, we recommend to use the 100 mM $MgSO_4$ stock to prepare a titration from 2 mM to 4mM(final concentration) in 0.25mM increments.
2) 0.5μL(2.5 units) enzyme is enough for per 50 μL reaction. For better amplification, up to 1μL(5units) enzyme can be used.

2.Reaction program

Cycle step	Temp.	Time	Cycles
Pre-denaturation	94℃	2-5 min	1
Transgender	94℃	30 sec	30-35
Annealing	50-60℃	30 sec	
Extension	72℃	1-2 kb/min	
Extended reach	72℃	5-10 min	1

Notes

1. For your safety and health, please wear a lab coat and disposable gloves when operating.

2. This product is for scientific research purposes only!