WIRAGEN
Molecular Research Tools

TECHNICAL SHEET:

Kit PCR

Ref : PW01 Storage : -20 C

Kits Contents:

product	size
Taq Polymerase	500 Units (5U/ul)
10 x Taq Buffer	0.5ml
2,5 mM dNTPs	0.5ml
6x DNA Loading Buffer	0.5ml

Description :

This comprehensive PCR Kit contains Taq DNA Polymerase for reliable amplification, a 10X Taq Buffer to optimize enzyme activity and reaction conditions, a 2.5 mM dNTP mix for accurate and efficient DNA synthesis, and a 6X Loading Buffer for easy sample preparation and electrophoresis. Ideal for a wide range of PCR applications, the kit is designed to achieve high specificity and consistent performance in DNA amplification. Components should be stored at -20°C to preserve their quality and stability.

Highlights :

- Extension rate is about 1-2 Kb/min.
- Template-independent A can be generated at the 3′ end of the PCR product.
- PCR products can be directly cloned into pEAT vectors.
- Amplification of genomic DNA fragment up to 4 KB.

Application :

- Routine PCR
- Colony PCR

Unit definition :

One unit of Taq Polymerase incorporates 10 nmol of deoxyribonucleotide into acid-precipitable material in 30 minutes at 74°C.

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Quality content :

Taq polymerase has passed the following quality control assays : functional absence of double-and single-strand endonuclease activity homogenous measured by SDS-PAGE. Each batch of taq Polymerase has been assayed for amplification efficiency to amplify p53 gene form 10 ng 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, stabilizes

10x Taq Buffer (with Mg+)
200 mM Tris-HCL (pH 8.3), 200 mM KCL. 100 mM $(NH_4)_2SO_4$. 20 mM $MgSO_4$, others.

6x DNA loading Buffer :
6X DNA Loading buffer is used as loading buffer in nucleic acid electrophoresis. Prior to loading, add appropriate volume 6x DNA Loading buffer to DNA sample to make its working concentration at 1x and then load the DNA samples into the electrophoresis.

Reaction Components :

product	Volume	Final concentration
DNA (Template)	Variable	As required
Forward primer (10uM)	1 ul	0.2 uM
Reverse primer (10uM)	1 ul	0.2 uM
10xTaq Buffer	5 ul	1x
2,5 mM dNTPs	4 ul	0.2 mM
Taq Polymerase	0.5-1ul	2.5-5 units
ddH2O	Variable	
Total volume	50 ul	

Thermal cycling conditions :

94°C	2-5 m	
94°C	30 sec	30-35CYCLES
50-60°C	30 sec	
72°C	1-2 Kb/min	
72°C	5-10 m	

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