KlenTaq DNA polymerase

Description:

KlenTaq DNA Polymerase has no the N-terminal portion of the gene, encoding *Thermus aquaticus* (*Taq*) DNA polymerase, leaving a highly active and even more thermal stable DNA polymerase activity.

KlenTaq has a wide range of optimal MgCl2 concentration. The optimal range of Mg 2+ concentration for KlenTaq is broader than for the majority of thermostable polymerases. The mutation rate during polymerization is two-fold lower for KlenTaq in comparison with full-length Taq DNA polymerase.

This product is suitable for mutation analysis with mutation-specific oligonucleotides. It has a very low background ability to extend a mismatched 3'-oligonucleotide end making it suitable for mutation analysis with mutation-specific oligonucleotides. Amplicons are T/A cloning compatible

Buffers and Reagents:

Storage Buffer: 20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.5 mM EDTA, 0.1 mM DTT, 0.5% Tween 20,0.5 % Nonidet P-40, 50% Glycerol.

10X Reaction Buffer: Contains Tris-HCl (pH 9.0), PCR enhancers, (NH4)2SO4

Contents:

Component	C101121	C101122
KlenTaq DNA poly. 5 U/µl	250 U	500 U
$MgCl_2$ Solution 25 mM	0.5 ml	1 ml
10X Buffer $MgCl_2$ free	0.5 ml	1 ml

Kit storage: This kit should be stored at -20°C. Unnecessary repeated freeze/thawing should be avoided. Under these conditions reagents are stable for one year from the date of production.

General Reaction Protocol:

Please be sure to follow below

1. Thaw 10X reaction buffer , dNTP mixture.

Component	Vol (µL)
10X Reaction Buffer	2 µL
MgCl2 Solution 25mM	2.2 µL
40 mM dNTPs Mix (10 mM each)	0.5 µL
Upstream Primer (10 pmol/µl)	1 µL
Downstream Primer(10 pmol/µl)	1 µL
KlenTaq (5 units/µL)	0.25 µL
Template DNA	Variable
Sterilized D.W.	Variable
Total Volume	20 µL

2. Mix the master mix thoroughly and dispense appropriate volumes into PCR tubes or plates.
3. Add templates DNA to the individual PCR tubes or wells containing the master mix.
5. Program the PCR machine according to the program outlined.

6. Place the PCR tubes or PCR plates in the terminal cycler and start the cycling program.

7. Separate the PCR products by agarose gel electrophoresis and visualize with EtBr or any other means.

Cycle	Time	Temp °C
1	3 Min	94
25 ~35	30 Sec	94
	30 Sec	50~60
	30 ~60 Sec	72
1	3 Min	72