ExPrime Taq DNA Polymerase

Cat. No.	Size	Remark
G-4000	250 units	with dNTPs mix., +Mg buffer

Package Information

G-4000	- ExPrime Taq DNA Polymerae (5 units/㎕): 50 ㎕ - 10x reaction buffer (with $MgCl_2$): 1.0 mL - 10mM dNTP Mixture (2.5mM of each dNTPs): 0.5 mL

Description

ExPrime Taq DNA Polymerase is easy to obtain PCR products in case of over 5 Kb as well as under 10 Kb of DNA amplified products (Long PCR). Also ExPrime Taq DNA Polymerase gives you the satisfying result under 20 Kb by altering of some conditions (Conventration of template, primer, DNA polymerase or increase of extension time).

Buffer 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, 50% Glycerol
10x Reaction Buffer: Contains Tris-HCl (pH 9.0), 20 mM $MgCl_2$,
$(NH_4)_2SO_4$ and PCR enhancers.
10mM dNTP mixture: 2.5mM of each dNTPs

Usage Information

▣ A DNA fragment which is amplified by ExPrime Taq DNA Polymerase has A-overhang, and it enables you to do cloning by using T-vectors.
▣ This product is sold for research purpose only. This is not to be used for human diagnostic or drug purposes.
▣ All claims must be brought within expired date.

◙ Research Use Only

◙ Store at -20℃
(Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.)

Protocol

Optimal reaction conditions, such as reaction time, temperature and amount of template DNA, may vary and must be individually determined.

1. Thaw 10x reaction buffer.

2. Prepare a master mix.

Components	Volume	Final Conc.
10x reaction buffer	5 ㎕	1x
10mM dNTP Mix.	1 ~ 5㎕	0.2 ~ 1.0 mM
25mM $MgCl_2$ (1)	2 ~ 10㎕	1 ~ 5 mM
Upstream Primer	Variable	0.1 ~ 1.0 uM
Downstream Primer	Variable	0.1 ~ 1.0 uM
ExPrime Taq DNA Pol. (5u/㎕)	0.6 ~ 1.25㎕	1.2 ~ 2.5 u
Template DNA (2)	Variable	10 fg~1 ㎍
Sterilized D.W	Variable	-
Total Volume	50 ㎕	-

(1) If user use the 10x reaction buffer(-Mg), user can select $MgCl_2$ conc..
(2) Amount of template:
- Bacteriophage lambda, cosmid, plasmid: 10 fg ~ 300 ng
- Total genomic DNA: 100 ng ~ 1 ug

3. Mix the master mix and dispense appropriate volumes into PCR tubes. Centrifuge the reactions in a microcentrifuge for 10 seconds.

4. Perform PCR using your standard parameters (3-step cycling).

Step	Temp. & Time		Cycles
	Temp.	Time	
Initial denaturation	95℃	5 min.	1
Amplification	95℃ 50~60℃ 72℃	30 sec. 30 sec. 30~60 sec.	25 ~ 45
Final extension	72℃	5 min.	1

* For PCR products longer than 3~4kb, use an extension time of approximately 1 min per Kb DNA.

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