



PRODUCT INFORMATION **EZ-FD PCR DNA High Fidelity DNA polymerase**

Product information for: 9K-005-0019

Description:

EZ-FD-High Fidelity DNA polymerase is good for long-range PCR, and it has dual advantages of HotStart *Taq* DNA polymerase and *Pfu* DNA polymerase. It is recommended to reduce the extension temperature at 72 °C to 68 °C and to increase the amount of dNTP about 1.5 times more if the product size is over 5 kb. You may modify the amount of template, extension time, annealing temperature, amount of *Taq* DNA polymerase, the number of PCR cycle and amount of 5X Band Sharpener according to the target size, primer's T_m , and the type of templates for amplification.

Product Contents

Contents	9K-005-0019
EZ-FD -High Fidelity DNA Polymerase (25 U/ul)	500U
10X EZ-FD-Reaction Buffer (25mM MgCl ₂ mixed)	1.2 mL x 2
10mM dNTP Mix(dATP, dTTP, dGTP, dCTP)	0.6mL
5X Band Sharpener	1.2mL

Features

Features	EZ-FD High Fidelity DNA Polymerase
Source	<i>Thermus aquaticus</i> & <i>Pyrococcus furiosus</i>
5' → 3' exonuclease activity	Yes
3' → 5' exonuclease activity (fidelity)	Yes (weak)
Amplification Size	< 40 kb PCR
HotStart Activity	Yes
A-tailing	Yes
Expiration date (storage at -20°C)	2 Years and 3 Months

Recommended PCR mixture & cycling

PCR Mixture(Reacting vol. for 50 ul)		Cycle		
10X EZ-FD Reaction Buffer	5 ul			
10mM dNTPmix	1ul	95 °C	2 min	X 1
Forward Primer (10 pmole/μℓ)	2ul	95 °C	20 sec	X 1
Reverse Primer (10 pmole/μℓ)	2 ul	AT	40 sec	X 25-40
Template DNA (< 200 ng)	-	72 °C	1 min/Kb	
5X Band Sharpener	0-20ul	72 °C	5 min	X 1
EZ-FD-High Fidelity DNA Polymerase(5 U/μℓ)	0.5ul	8°C	∞	
Add D.W.to	50 ul			



5XBand Sharpener: Improved results can be obtained by adjusting of 5X Band Sharpener if template has high G+C region or secondary structure. Please add 5X Band Sharpener to be final concentration 0.5X-2X (5-20ul for 50ul reaction) if needed.

Example of using for 5X Band Sharpener

Reaction vol. 50 ul

Reaction mixture (conc. of 5X Band Sharpener)	Mix I (0X)	Mix II (0.5X)	Mix III (1X)	Mix IV (1.5X)	Mix V (2X)
10X EZ-FD Reaction Buffer	5ul	5ul	5ul	5ul	5ul
10 mM dNTPmix	1ul	1ul	1ul	1ul	1ul
Forward Primer (10 pmole/ ul)	2ul	2ul	2ul	2ul	2ul
Reverse Primer(10 pmole/ ul)	2ul	2ul	2ul	2ul	2ul
Template DNA	-	-	-	-	-
5X Band Sharpener	0ul	5ul	10ul	15ul	20ul
EZ-FD-High Fidelity DNA Polymerase(5 U/ μ l)	0.5ul	0.5ul	0.5ul	0.5ul	0.5ul
Add D.W to	50ul	50ul	50ul	50ul	50ul