High fidelity DNA Polymerase 2X Master Mix
(Cat. # 786-1968, 786-1969)

Introduction

G-Biosciences high-fidelity DNA Polymerase 2x master mix is ready to use premix which contains high fidelity DNA Polymerase, dNTPs and optimized buffer with stabilizers. The high-fidelity DNA Polymerase possesses 5′→3′ polymerase and 3′→5′ exonuclease (proofreading) activities which has the fidelity, sensitivity and processivity with an error rate ~2.8×10^2-fold lower than Taq DNA polymerase, and significantly lower than other proofreading DNA polymerases.

Functional features

- High fidelity PCR
- Cloning
- Long and high GC content template DNA amplification

Items Supplied

Cat #	786-1968	786-1969
High-fidelity DNA Polymerase 2X master mix	2 x 1.25ml	10 x 1.25ml

Storage temperature

- 20°C.

Protocol

1. Set up PCR reaction as follows:

PCR reaction set up:	
Template	~1-20 ng
Forward primer (3.2 µM)	1.0 µl
Reverse primer (3.2 µM)	1.0 µl
High fidelity DNA Polymerase 2X master mix	10.0 µl
H_2O up to	20.0 µl

2. Run PCR with the following program:

PCR cycling conditions:			
Steps	Temperature	Time	Cycles
Initial denaturation	98ºC	2 min	1
Denaturation	98ºC	20 sec	30-35
Annealing	56ºC-60 ºC	20 sec	
Extension	72ºC	30 sec/kb	
Final extension	72ºC	5 min	1
Hold	4ºC		

3. Take 7.5 µl samples and add loading dye
4. Run 1% agarose gel electrophoresis
5. Scan the gel and analyze the data.

Typical QC data

The enzyme activity was tested with lambda DNA as a template using 1 to 5kb PCR primers.