

## TruFidelis Pro PCR Master Mix

FB02004010 100 Reactions

FB02004050 500 Reactions

Store at -25°C to -15°C

TruFidelis Pro PCR Master Mix is a ready-to-use mixture of DNA polymerase, salts, magnesium, and dNTPs for efficient PCR amplification. It retains all the features of TruFidelis Pro DNA Polymerase:

- >290X higher fidelity than Taq DNA polymerase.
- Antibody-mediated hot-start to inhibit DNA polymerase activity at ambient temperatures, allowing room temperature reaction setup and storage of PCR reactions for up to 24 hours prior to PCR.
- Robust Performance: Capable of amplifying up to 20 kb, including complex and GC-rich templates (>65% GC).
- Produces blunt-end DNA products.

### Kit contents

Reagents	100 Reactions	500 Reactions	Description
2X TruFidelis Pro PCR Master Mix	2 x 1.25 mL	10 x 1.25 mL	Provides 1.5 mM MgCl <sub>2</sub> in 1X concentration
5X TruFidelis Pro GC Enhancer	1.25 mL	4 x 1.25 mL	Recommended for targets with >65% GC Sequence
Water, nuclease-free	2 x 1.25 mL	10 x 1.25 mL	-

## PCR Reaction Setup:

For multiple reactions, prepare a master mix of components common to all reactions to minimize pipetting error, then dispense appropriate volumes into individual PCR tube before adding template DNA and primers.

Component	25 $\mu$ L Reaction	50 $\mu$ L Reaction	Final Concentration
Water, nuclease-free	to 25 $\mu$ L	to 50 $\mu$ L	-
2X TruFidelis Pro PCR Master Mix	12.5 $\mu$ L	25 $\mu$ L	1X
10 $\mu$ M Forward Primer	1.25 $\mu$ L	2.5 $\mu$ L	0.5 $\mu$ M
10 $\mu$ M Reverse Primer	1.25 $\mu$ L	2.5 $\mu$ L	0.5 $\mu$ M
Template DNA	varies	varies	5-50 ng (gDNA) or 1pg-10 ng (plasmid DNA) per 50 $\mu$ L reaction
5X TruFidelis Pro GC Enhancer (optional)	5 $\mu$ L	10 $\mu$ L	1X

## Thermal Cycling Conditions on Thermal Cycler:

Step	2-Step protocol (<10 kb)		3-Step protocol (<10 kb)		Long PCR (>10 kb)		
	Temp.	Time	Temp.	Time	Temp.	Time	
Initial denaturation	98°C	30 sec	98°C	30 sec	95°C	2 min	
25-35 PCR cycles	Denature	98°C	5-10 sec	98°C	5-10 sec	95°C	10 sec
	Anneal	72°C	15-30 sec/kb	varies	10 sec	varies	10 sec
	Extend			72°C	15-30 sec/kb	68°C	30 sec/kb
Final extension	72°C	5 min	72°C	5 min	68°C	5 min	
	4°C	hold	4°C	hold	4°C	hold	

Use your PCR product immediately in downstream applications, or store it at -20°C.