

TruFidelis Pro DNA Polymerase

FB02003010 100 Units

FB02003050 500 Units

Store at -25°C to -15°C

TruFidelis Pro is a high-fidelity DNA polymerase with proofreading capability, ideally suited for cloning, mutagenesis, and other applications.

- >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 Units	500 Units	Description
TruFidelis Pro DNA Polymerase	50 µL	250 µL	-
5X TruFidelis Pro Buffer	2 x 1.25 mL	6 x 1.25 mL	Includes 7.5 mM MgCl ₂
5X TruFidelis Pro GC Enhancer	1.25 mL	4 x 1.25 mL	Recommended for targets with >65% GC Sequence

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 µL Reaction	50 µL Reaction	Final Concentration
Water, nuclease-free	to 25 µL	to 50 µL	-
5X TruFidelis Pro Buffer	5 µL	10 µL	1X
10 mM dNTP Mix	0.5 µL	1 µL	0.2 mM each
10 µM Forward Primer	1.25 µL	2.5 µL	0.5 µM
10 µM Reverse Primer	1.25 µL	2.5 µL	0.5 µM
Template DNA	varies	varies	5-50 ng (gDNA) or 1pg-10 ng (plasmid DNA) per 50 µL reaction
TruFidelis Pro DNA Polymerase	0.25 µL	0.5 µL	0.02 U/µL
5X TruFidelis Pro GC Enhancer (optional)	5 µL	10 µL	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.