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VitaProof® is a high-fidelity Pfu DNA polymerase that exhibits a 3'->5' exonuclease activity. This feature allows the removal of falsely incorporated nucleotides making VitaProof® the ideal choice for applications that require an elevated level of fidelity.

Product	Size	SKU
VitaProof® PCR Kit	250 U	PCCSKU1016
	500 U	PCCSKU1017
	2500 U	PCCSKU1018

Additional Materials Required

- Nuclease free PCR tubes or plates
- PCR cycler
- PCR Primer
- dNTPs
- Template DNA
- Filter pipette tips
- Sterile, nuclease-free, DNA-free tubes for preparing the reaction mix

Storage

Store all components at -20°C and avoid repeated freeze and thaw cycles.

Reaction Setup

1) Thaw all components on ice and mix gently to ensure even distribution of all components. Prepare the reaction on ice in a sterile, nuclease free tube and mix gently after addition of the polymerase. Collect all liquid at the bottom of the tube by a quick spin. Keep the reaction on ice until you transfer it to the thermocycler.

Component	Volume	Final Concentration
10X VitaProof® Buffer	5 µl	1X
dNTP Mix (10 mM each)	1 µl	0.2 mM each
Primer 1 (10 µM)	1 µl	0.1 µM – 0.5 µM
Primer 2 (10 µM)	1 µl	0.1 µM – 0.5 µM
VitaProof® 2.5 U/µl	0.5 µl	1.25 U
template DNA	1 µl	< 1 µg
dH_20		to 50 µl

2) Transfer the reactions to the thermocycler, then cycle according to these guidelines:

Step	Cycles	Temperature	Duration
Initial	1	94°C	5 minutes
Amplification	25-35	94°C	30 seconds
		T_m – 5°C	30 seconds
		72°C	1-2 minutes / kb
Final Extension	1	72°C	5 minutes

3) Analyze the amplification reaction by gel electrophoresis using an acrylamide or agarose gel of appropriate percentage.