

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	TRAXSKU1016
	500 U	TRAXSKU1017
	2500 U	TRAXSKU1018

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 ₂ O		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
		94°C	30 seconds
Amplification	25-35	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.