Vita LongRange Kit

Vita LongRange Kit offers an option for the amplification of targets up to 15 kb. The enzyme mix combines the best features of VitaTaq® and VitaProof®: short extension times of 30 seconds / kb combined with the increased fidelity by VitaProof's® exonuclease activity.

Product	Size	SKU
Vita LongRange Kit	100 rxn / 50 µl	TRAXSKU1013
	200 rxn / 50 µl	TRAXSKU1014
	500 rxn / 50 µl	TRAXSKU1015

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 LongRange 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
LongRange Enzyme Mix	0.5 µl	
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 Denaturation	1	94°C	5 minutes
Amplification	25-35	94°C	30 seconds
		T_m – 5°C	30 seconds
		72°C	30 seconds / kb[1]
Final Extension	1	72°C	5 minutes

[1] for amplification from complex targets like genomic DNA, 1 minute / kb is recommended.

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

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