VitaTaq® DNA Polymerase & 2X Mastermix

for research use only

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VitaTaq® DNA Polymerase is a robust and reliable Taq DNA polymerase suitable for all common PCR applications like colony PCR, cloning applications, high-throughput PCR and routine PCR.

Product	Size	SKU
VitaTaq®DNA Polymerase + 10X Buffer	500 units	PCCSKU1001
	1000 units	PCCSKU1002
	5000 units	PCCSKU1003
2X HS Mastermix Clear	2 ml	PCCSKU1004
	5 ml	PCCSKU1005
	10 ml	PCCSKU1006
2X Mastermix Gold	2 ml	PCCSKU1007
	5 ml	PCCSKU1008
	10 ml	PCCSKU1009

Storage Conditions

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

Additional Materials Required

Nuclease free dH_2O
Nuclease free PCR tubes / plates & sealing options
Thermocycler
PCR Primer (10 µM each)
dNTP Mix (10 mM each)[1]
template DNA
[1] (not required for 2X Mastermix Clear/Gold)

Reaction Setup

1) Thaw all reaction components completely and mix gently to ensure even distribution off 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.

Component	Volume	Final Concentration
10X PCR Buffer	5 µl	1X
dNTP Mix (10 mM each)	0.5 µl	0.1 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
VitaTaq® DNA Polymerase (5 U/µL)	0.2 µl	1 U
template DNA	1 µl	<1 µg
dH_2O	to 50 µl	

2) Keep the reactions on ice until transfer to the thermocycler, then cycle according to these guidelines:

Step	Cycles	Temperature	Duration
Initial Denaturation	1	94°C	5 minutes
Amplification	30-35	94°C	30 seconds
		T_m – 5°C	30 seconds
		72°C	1 minute / kb
Final Extension	1	72°C	5 minutes
Hold	1	4°C	

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

2X HS Mastermix Clear / Gold

For routine applications, VitaTaq® DNA Polymerase is available as a 2x mastermix formulation; all there is to add is your primers and template DNA.
2X HS Mastermix Gold furthermore contains a tracking dye that enables direct gel loading without addition of a separate loading dye. For increased fidelity, 2X Mastermix Clear/Gold comes with a HotStart feature that allows reaction setup at room temperature.

Reaction Setup

1) Thaw all reaction components completely and mix gently to ensure even distribution off all components. Prepare the reaction in a sterile, nuclease free tube and mix gently. Collect all liquid at the bottom of the tube by a quick spin.

Component	Volume	Final Concentration
2X HS Mastermix Clear/Gold	25 µl	1X
Primer 1 (10 µM)	1 µl	0.1 µM – 0.5 µM
Primer 2 (10 µM)	1 µl	0.1 µM – 0.5 µM
template DNA	1 µl	<1 µg
dH_2O	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	30-35	94°C	30 seconds
		T_m – 5°C	30 seconds
		72°C	1 minute / kb
Final Extension	1	72°C	5 minutes
Hold	1	4°C	

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