PCR Check System

Quantity: 20 reactions

Store: -20°C (not frost free)

Cat. No.: PK3091

Description: The *PCR Check system* provides qualified reagents for the control of PCR reaction. PCR Check System is supplied with quality tested Taq DNA Polymerase (#DP1602), 10X PCR buffer (#MM2101), and a vial of $MgCl_2$ (#MM2091), 10mM dNTP mix (#MM2082), DNA template and related "Reverse" and "Forward" Primers. For added convenience, nucleotides are provided as a 10mM dNTP mix. The *PCR Check system*'s reagents are sufficient for 20 reactions of 25µl each.

Components (supplied):

Taq DNA Polymerase (5 unit/µl)	8µl
10X PCR Buffer	50µl
50mM Magnesium Chloride	15µl
dNTP Mix (10mM)	10µl
Control DNA (1pg/µl)	100µl
Forward Primer	20µl
Reverse primer	20µl
Distilled Water	5ml
Mineral Oil	1ml

Control DNA: (Supplied) DNA extracted from an insert in plasmid. This DNA has been thoroughly tested for its performance in several PCR reactions with various annealing temperatures ranging from 40-65°C. The amplified DNA shows a band of 620bp in an Agarose gel. This DNA may be used in parallel as control.

Control forward and Reverse primer:
(Supplied) These primers have successfully been used and tested in several PCR reactions with mentioned control DNA.

PCR Runs: The *PCR Check system* is used for amplification of different reactions.
Data obtained from all of the reactions was satis-factory.

Basic PCR protocol:
The following basic protocol serves as a general guideline and a starting point for any PCR amplification. Optimal reaction conditions (incubation times, temperatures, concentration of Taq DNA Polymerase (#DP1602), primers, $MgCl_2$, and template DNA) vary and to be evaluated by the user. If you have any problem with your PCR system, you can check each reagent by *PCR Check System* kit and evaluate your PCR system.

Add the following components to a sterile 0.5ml micro-centrifuge tube sitting on ice:

Components	**Volume**	**Final Con.**
Autoclaved distilled water	14µl	
10X PCR buffer	2.5µl	0.2mM each
10mM dNTP mix	0.5µl	0.2mM each
50mM $MgCl_2$	0.75µl	1.5mM
Forward primer	1µl	0.5µM
Reverse primer	1µl	0.5µM
Control DNA (4pg/µl) 5µl	20pg	
Taq DNA polymerase	0.2µl	1 unit
Mineral Oil	25µl	

Steps	**Temperature**		**Range of duration (seconds)**	
Denature	95°C		120sec.	
Denature	93°C	10sec.	45sec.	**35 cycles**
Anneal	40-65°C	10sec.	60sec.	
Extend	72°C	20sec.	90sec.	

Result analysis:
Analyze 10µl of amplified samples in a 2% agarose gel after adding loading buffer. The presence of 620bp fragment indicates of positive.

Centrifuge Tubes Before Opening To Improve Recovery Of Contents.

For Research Use Only

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