



Pfu-DNA-Polymerase and Buffer Set

Source

the Pfu-DNA-Polymerase is a thermostabile polymerase of ca. 92 kDa size, original isolated from the hyperthermophile archaeobacteria pyrococcus furiosus. The enzyme replicates DNA by an optimum of 75 °C, by catalysing polymerisation of nukleotides to duplex-DNA in 5' -> 3'-direction in the presence of magnesium, and privileged by MgSO₄.

Different to Taq-DNA-Polymerase, the Pfu-DNA Polymerase additionally has a 3' -> 5'-exonuklease-activity, the so called „proofreading-activity“, which enables the correction of wrong build-in nukleotides and, therefore, the establishment of almost faultless PCR-products. The precision of the DNA Synthesis is in contrast to the Taq-DNA Polymerase about 12 times as much higher, the error rate is about 0.2×10^{-5} .

The with the Pfu-DNA Polymerase produced PCR products have „blunt ends“ and can directly be used in ligation reagents. The extension rate of the Pfu-DNA Polymerase is about 0. kb/min, therefore, 1–2 min extension time/kb fragment length is recommended.

Field of applications

PCR- und Primer-Extensions reagents, which need a high precision.

Quality control

use in test PCRs; examination on DNA-background.

Scope of Delivery

100 µl Pfu-DNA-Polymerase (5 U/µl)
1000 µl Reaction Buffer I (10×)
1000 µl Reaction Buffer C (10×)
1000 µl MgSO₄-Solution (100 mM)

Quantity	500 Units
Concentration	5 Units/µl
Delivery	non-chilled
Storage	at -20°C

	Pfu-DNA-Polymerase Set
Cat. No.	TK-005222
Quantity	500