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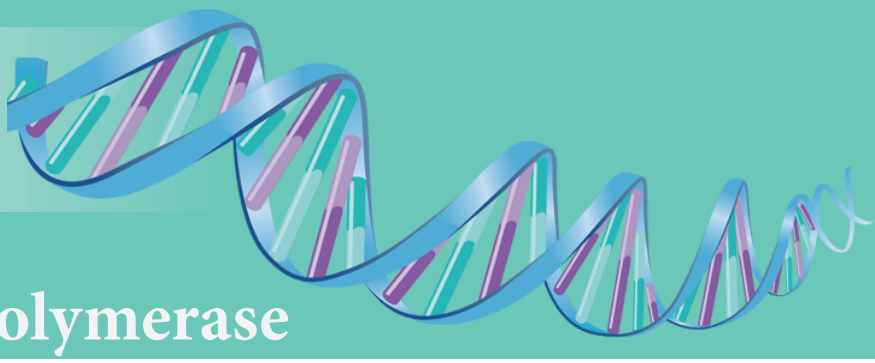

MorreTaq Pfu DNA Polymerase

The Pfu DNA Polymerase For Correct Research

MorreTaq Pfu DNA polymerase is a thermostable enzyme isolated from Pyrococcus furiousus. The enzyme replicates DNA at 75°C, catalyzing the polymerization of nucleotides into duplex DNA in the 5'-3' direction. Pfu DNA polymerase possesses 3'-5' exonuclease (proofreading) activity. Base misinsertions that may occur during polymerization are rapidly excised by the proofreading activity of the polymerase. Pfu DNA polymerase is recommended for use in PCR and primer extension reactions that require high-fidelity synthesis.
Pfu DNA polymerase-generated PCR fragments are blunt-ended.

Error rate
2 x10^-6

Reaction Buffer (10x) with $MgSO_4$
200 mM TrisHCl (pH 8.8 at 25°C), 100 mM KCl, 100 mM $(NH_4)_2SO_4$, 20 mM MgSO4, 1.0% Triton X-100

Storage conditions
Storage at -20℃

Unit Definition
Reaction Buffer (10x) with $MgSO_4$:
One unit of Pfu DNA Polymerase incorporates 10 nmol of dNTP into acid-insoluble material in 30 min at 74°C.

Primers
Use 0.3 µM per primer as a general starting point. For larger amounts of template (e.g., 200 ng genomic DNA), increasing the concentration up to 0.5 µM per primer may improve yield.

Annealing Temperature
The annealing temperature is typical PCR. The optimal annealing temperature should be ~2°C lower than the Tm of the primers used. A range of 50–68°C is recommended.

Extension Time
As little as 1mins per kb is suitable for most targets. Use up to 2mins per kb for maximum yield.

PCR reaction mix

Component	Volume
MorreTaq pfu DNA polymerase	0.5-1ul
10X buffer	10 ul
10mM dNTP	2 ul
Primer1 (20 pmol)	2-4 ul
Primer2 (20 pmol)	2-4 ul
template	1-10 ul
ddH_2O	Up to 100 ul
Total	100 ul

PCR cycles

Step	Temperature	Time	Cycle
Initial denaturation	94-95℃	1-3 mins	1
Denaturation	94-95℃	0.2-1 mins	
Annealing	50-68℃	0.2-1 mins	25-35
Extension	72℃	2min/1kb	
Final extension	72℃	5 mins	1

Step
After cycling, maintain the reaction at 4°C. Samples can be stored at –20°C until use.

Ordering information

Cat.	Pack	Con.
MPF500	500U	5U/ul
MPF2500	2500U	5U/ul

For Research Use Only.
Not for use in diagnostic procedures.

About MORREBIO
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