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MorreTaq DNA Polymerase

The MorreTaq For General Research

MorreTaq DNA polymerase is a thermostable enzyme of isolated from Thermus aquaticus. This enzyme contain 5'- 3' polymerase and 5'- 3' exonuclease activity.

Storage buffer

50mM Tris-HCl pH7.9, 50mM KCl, 0.1mM EDTA, 1mM DTT, 0.5mM PMSF , 50% lycerol.

10X reaction buffer

buffer A containing 15mM $MgCl_2$.
buffer B without $MgCl_2$.

Unit description

One unit is defined as the amount of enzyme that will incoporate 10 nmole of dNTP into acidinsoluble material in 30 minutes at 74℃. The reaction conditions are: 50mM Tris-HCl pH8.8, 50mM NaCl, 5mM $MgCl_2$, 200uM each of dATP, dCTP, dGTP, H3dTTP, 10 ug activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50 ul.

Storage

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at -20℃, 100 mM KCl, 0.1 mM EDTA.

Source

E coli clone

Quality control

The enzyme is free of nicking and priming activities, exonucleases and non-specific endonucleases. SDS/PAGE - 95 kD band. Activity and stability tested via thermo-cycling. The error rate per nucleotide per cycle is ~ 2.5 x 10-5; the accuracy is ~ 4 x10^4. Estimated half life at 95°C is 1.5 hours.

Shipping and Storage conditions

Shipping and temporary storage at -20℃ for up to 1 month at room temperature has no detrimental effects on the quality of MorreTaq DNA polymerase.

PCR reaction mix

Component	Volume
MorreTaq	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℃	10-60sec	
Annealing	50-68℃	10-30 sec	25-35
Extension	72℃	1min/1kb	
Final extension	72℃	1-10 mins	1

IMPORTANT

Annealing temperature should be 2-6°C lower than the primer melting temperature.

Ordering information

Cat.	Quantity	Con.
MTQ500	500U	5U/ul
MTQ2500	2500U	5U/ul

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

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