Gojira Fine Chemicals, LLC

Fast Taq Polymerase

Cat. No: FT1001

Product Information Leaflet

Description

Fast Taq Polymerase is a thermostable recombinant DNA polymerase expressed by Thermus aquaticus. The enzyme uses state-of-the-art polymerase technologies and optimized buffer chemistry for improved polymerase processivity, yield, sensitivity, and specificity. Fast Taq Polymerase has an error rate of approximately 1 error per 2.0 x 105 nucleotides incorporated.

Fast Taq Polymerase has 5' to 3' polymerase activity and 5' to 3' exonuclease activity, but lacks 3' to 5' exonuclease activity. The enzyme is suitable for routine PCR applications including TA cloning, genotyping, screening, and library construction. The amplified product generated by Fast Taq Polymerase has 3'-dA and can therefore be cloned directly into TA cloning vectors. The enzyme is also compatible with a variety of DNA templates such as GC- and AT-rich DNA templates.

Kit components

Component	*Cat. no. FT1001 500 Units
Fast TaqPolymerase (5 U/µL)	1 X 0.1 mL
∞5x Reaction Buffer	4 X 1 mL

*Other pack sizes or bulk orders are available upon request.

∞The 5x Reaction Buffer has been formulated for robust PCR performance. The buffer contains $MgCl_2$, dNTPs, stabilizers, and enhancers. Therefore, no further addition of these components is required or recommended.

Storage and shipment

Transport with an ice pack or on dry ice (for shipments taking more than 2 days). The reagents should be stored between -30°C and -15°C upon arrival. The reagents are stable for 12 months if stored correctly.
The reagents are stable for 1 month at 4°C.

Mastermix set-up

The recommended mastermix set-up for a 50 µL reaction volume is shown in the table below.

Reagent	Volume (µL)	Final concentration
5x Reaction Buffer	10	1x
∞Forward primer (10 µM)	2	400 nM
∞Reverse primer (10 µM)	2	400 nM
DNA/cDNA template	X	Variable; <100 ng cDNA, <500 ng genomic
Fast Taq Polymerase (5 U/µL)	0.25–1	Variable; can be titrated over a wider range
Nuclease-free water	Up to 50 µL final volume	
Total volume	50 µL	

∞Primers should be specific to the target DNA/RNA of interest. The recommended Tm for primers is between 56°C and 60°C.

Instrument and program set-up

Number of cycles	Step	Tempera-ture	Time
1	Pre-denaturation	95°C	1 min
40	Denaturation	95°C	15 sec
	Annealing	55–65°C	15 sec
	*Extension	72°C	1–90 sec

*The extension time should be 15 seconds per kb of target region.

Technical information and support

For technical inquiries or assay development support, please contact us via e-mail at: docsupport@gojirafc.com. Additional information and technical resources are available on our website: WWW.gojirafc.com