AccuGO™ Pfu proofreading DNA polymerase

Catalog number: C108300
Store at -20°C

Materials supplied:

1. AccuGO™ Pfu DNA polymerases 100U (2 units/μL) in storage buffer. (Cat.: C108301)
2. 5X AccuGO™ Pfu buffer 1.25mL (1 mL/vial) provides a final 2 mM Mg^{2+} concentration in the PCR reaction. (Cat.: C108302)

I. Description:

AccuGO™ Pfu DNA polymerase is a Pfu-based DNA polymerase specially provides both short extension time and high performance. It was designed to apply in the replication of DNA sequence required high fidelity and high efficiency. Like Pfu, AccuGO™ Pfu also exhibits 3'→5' exonuclease activity that provides the proofreading ability and results in higher fidelity during DNA synthesis. Moreover, AccuGO™ Pfu was engineered to have a better processivity than normal Pfu. Therefore, AccuGO™ Pfu can easily amplify up to 10 kb blunt-ended DNA fragment from variant template. Even if the template's GC content is up to 70%, AccuGO™ Pfu still has good performance. In short, AccuGO™ Pfu DNA polymerase is an ideal tool for molecular cloning containing long or complicated amplicons.

II. Applications:

1. High fidelity PCR.
2. Routine PCR amplification of DNA fragments up to 10 kb.
3. PCR products for cloning and expression.

III. Storage Condition

-20℃	4℃	25℃	37℃
1.5 years	2 months	21 days	14 days

IV. Recommended PCR Condition:

DNA	Amout
Genomic DNA	10-250 ng
Plasmid DNA	1 pg -10 ng
cDNA	1 -100 ng

Component	Amount per reaction
DNA template	Variable
10 μM forward Primer	1 μL
10 μM reverse Primer	1 μL
10 mM each dNTP	1 μL
5X AccuGO™ Pfu buffer	10 μL
AccuGO™ Pfu DNA polymerase	0.5 μL
Nuclease-free water	to 50 μL
Total volume	50 μL

V. Thermocycling Conditions for a Routine PCR:

The recommended parameters may be optimized for each new primer-template pair for optimal specificity and amplification.

Cycles	Step	Temperature	Time
1	Initial denaturation	95℃	1-5 mins
25-35	Denaturation	95℃	10-30 s
	Annealing	45-72℃	10-30 s
	Extension	72℃	15-30 s/kb
1	Final Extension	72℃	5-10 mins
	Hold	14℃	--

VI. Experimental Data

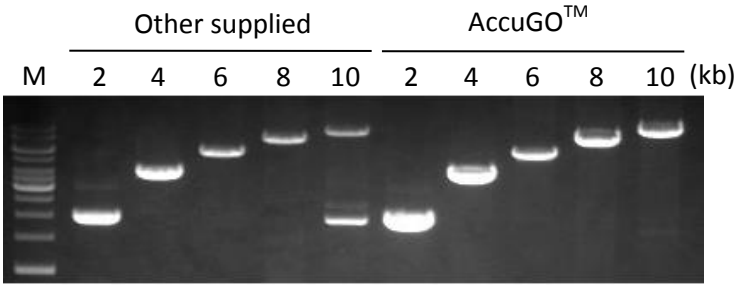

Figure 1. Comparison of PCR amplification performance between AccuGO™ and other suppliers' Pfu DNA polymerase.

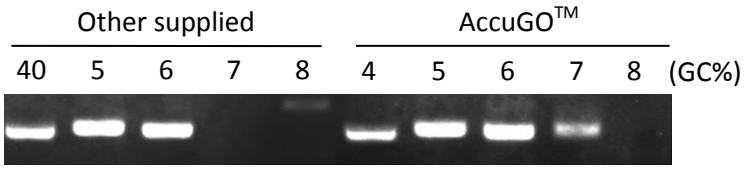

Figure 2. Comparison of the tolerance of GC content between AccuGO™ and other suppliers' Pfu DNA polymerase.

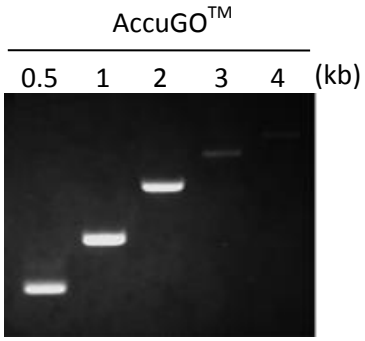

Figure 3. Comparison of the different PCR amplifications at extension time 30 (sec) of AccuGO™.

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