AmpliTaq Gold[®] DNA Polymerase

	Package Contents	Catalog Number N808-0240 AmpliTaq Gold [®] with Buffer I N808-0241 AmpliTaq Gold [®] with Buffer II 4311806 AmpliTaq Gold [®] with Gold Buffer Kit Contents	Size 250 Units 250 Units 250 Units
	Storage Conditions	 Store all contents at –20°C. 	
	Required Materials	 Template: cDNA, gDNA, λDNA 10 mM dNTP mix (Cat. no. 18427-088) Forward and reverse gene-specific prime. Autoclaved, distilled water E-Gel[®] General Purpose Gels, 1.2% (Cat. no. TrackIt[™] 1 Kb Plus DNA Ladder (Cat. no. 0.2 or 0.5-mL nuclease-free microcentrifuged 	no. G5018-01) 10488-085)
	Timing	Varies depending on amplicon length	
Å	Selection Guide	PCR Enzymes and Master Mixes Go online to view related products.	
	Product Description	 AmpliTaq Gold[®] is derived from recombine 94 kDa DNA polymerase, encoded by a merital Thermus aquaticus DNA polymerase gene. 3 different buffers, which provide preferred strength for PCR amplification reactions. With AmpliTaq Gold[®] DNA Polymerase, F Release PCR can be introduced into existing systems by modifying cycling parameters conditions for increased specificity, sensiti AmpliTaq Gold[®] is provided in an inactive be completely or partially activated in a pristep, allowing flexibility and assembly of the temperature. 	odified form of the It is available with d pH and ionic Hot Start and Time ng amplification or reaction vity, and yield. e state and can re-PCR heat
	Important Guidelines	 Take precautions to avoid cross-contaminaerosol-resistant barrier tips and analyzina separate area from PCR assembly. If the samples contain EDTA or other che MgCl₂ concentration in the reaction mix p If proteases are present in the sample DN genomic DNA), inactivate the proteases have before adding Amp 	ng PCR products in lators, raise the proportionately. A (e.g. impure by heating samples
	Online Resources	Visit our product page for additional information and protocols. For support, visit www.lifetechnologies.com/support.	

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



Enzyme Characteristics

Hot-start:	Chemical
Length:	Up to 5 kb
Fidelity vs. Taq:	1X
Format:	Separate components

PCR Reaction Setup

Use the measurements below to prepare your PCR experiment, or enter your own parameters in the column provided.

Component	25-µL rxn	50-µL rxn	Custom		Final Conc.	
Autoclaved, distilled water	to 25 µL	to 50 µL	to	μL	_	
10X PCR Buffer I, II, or Gold Buffer	2.5 µL	5.0 µL		μL	1X	
10 mM dNTP Mix*	0.5–5.0 μL	1.0 µL		μL	0.2 mM	
25 mM MgCl ₂ **	1.5 µL	3.0 µL		μL	1.5 mM	
10 µM forward primer	0.5 µL	1.0 µL		μL	0.2 µM	
10 µM reverse primer	0.5 µL	1.0 µL		μL	0.2 µM	
Template DNA	varies	varies			<1 µg/rxn	
AmpliTaq Gold® DNA Polymerase (5 U/µL)	0.125 μL	0.25 μL		μL	1.25 U/ 50-µL rxn	

Substituting dUTP for dTTP to control PCR product carryover may require higher concentrations of dUTP (typically twice that of any other dNTP) for optimal amplification. * Use MgCl₂ with Buffer II or Gold only. Buffer I already contains Mg.

PCR Protocol

See page 2 to view a procedure for preparing and running your PCR experiment.

Optimization Strategies

hefer to the pop-up for guidelines to optimize your PCR reactions.

🕧 Limited Warranty, Disclaimer, and Licensing Information





AmpliTaq Gold[®] DNA Polymerase Protocol

The example PCR procedure below shows appropriate volumes for a single **50-µL** reaction. For multiple reactions, prepare a master mix of components common to all reactions to minimize pipetting error, and then dispense appropriate volumes into each 0.2–0.5 mL PCR reaction tube prior to adding template DNA and primers.

2 Image: Correct amount of water required to reach your final reaction volume. 2 Image: Correct amount of water required to reach your final reaction volume. 2 Image: Correct amount of water required to reach your final reaction volume. 3 Image: Correct amount of water required to reach your final reaction volume. 3 Image: Correct amount of water required to reach your final reaction volume. 4 Image: Correct amount of water required to reach your final reaction volume. 4 Image: Correct amount of water required to reach your final reaction volume. 4 Image: Correct amount of water required to reach your final reaction volume. 4 Image: Correct amount of water required to reach your final reaction volume. 4 Image: Correct amount of water required to reach your final reaction volume. 5 Image: Correct amount of amplification depends on cycle parameters. Start with 1.25 U/reaction. 6 Mix and briefly centrifigue the components. 7 Treamplate DNA and primer 1.0 µL 0.0 µL 0.0 µL 10 µM forward primer 1.0 µL 0.0 µL 0.0 µL 0.0 µL 10 µM forward primer 1.0 µL 0.0 µL 0.0 µL 0.0 µL 10 µM forward primer 1.0 µL 0.0 µ	Timeline		Steps	Procedure Details				
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