AmpliTaq Gold® 360 Master Mix

applied biosystems by life technologies™

Print Options

Package Contents

Catalog Number	Size
4398876	40 rxns
4398881	200 rxns
4398886	2,000 rxns
4398901	2,000 rxns

Kit Contents

Storage Conditions

- Store all contents at -20°C.

Required Materials

- Template: cDNA, gDNA, λDNA
- Forward and reverse gene-specific primers
- Autoclaved, distilled water
- E-Gel® General Purpose Gels, 1.2% (Cat. no. G5018-01)
- TrackIt™ 1 kb Plus DNA Ladder (Cat. no. 10488-085)
- 0.2 or 0.5-mL nuclease-free microcentrifuge tubes

Timing

Varies depending on amplicon length

Selection Guide

PCR Enzymes and Master Mixes
Go online to view related products.

Product Description

- AmpliTaq Gold® 360 Master Mix contains AmpliTaq Gold® 360 DNA Polymerase and optional 360 GC Enhancer.
- Activity is restored after the denaturation step in PCR cycling at 94°C, providing an automatic "hot start" and offering increased sensitivity, specificity, and yield, while allowing assembly of reactions at room temperature.
- AmpliTaq Gold® 360 Master Mix comes in a 2X format and was designed for 360° coverage of a full range of targets.

Important Guidelines

- Select the correct polymerase, PCR instrument, and cycling conditions for your application.
- Take precautions to avoid cross-contamination by using aerosol-resistant barrier tips and analyzing PCR products in a separate area from PCR assembly.
- Avoid creating bubbles when mixing the enzyme.
- If your application requires increased specificity, add 1–2 µL of 360 GC Enhancer per 50-µL reaction—2 to 5% (v/v) of the reaction.

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

Chemical	Chemical
Length:	Up to 5 kb
Fidelity vs. *Taq*:	1X
Format:	Master mix

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	–
AmpliTaq Gold® 360 Master Mix	12.5 µL	25 µL	µL	1X
360 GC Enhancer (optional)*	0.5–5.0 µL	1.0–10 µL	µL	0–20%
10 µM forward primer	0.5 µL	1 µL	µL	0.2 µM
10 µM reverse primer	0.5 µL	1 µL	µL	0.2 µM
Template DNA	varies	varies	varies	< 1 µg

* For targets with 65–75% GC, start with 5 µL in a 50-µL reaction (10% (v/v) of the reaction). For targets with > 75% GC, start with 10 µL in a 50-µL reaction (20% (v/v) of the reaction). For increased specificity, add 1–2 µL of 360 GC Enhancer per 50-µL reaction (2 to 5% (v/v) of the reaction).

PCR Protocol

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

Optimization Strategies

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

Limited Warranty, Disclaimer, and Licensing Information

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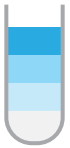
AmpliTaq Gold® 360 Master Mix Protocol

The example PCR procedure below shows appropriate volumes for a single, **70% GC-rich, 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.

Timeline	Steps	Procedure Details
1 	**Thaw reagents**	Thaw, mix, and briefly centrifuge each component before use. Avoid generating bubbles when mixing the MasterMix.
2 	**Prepare PCR master mix**	Add the following components to each PCR reaction tube. **Note:** Consider the volumes for all components listed in steps 2 and 3 to determine the correct amount of water required to reach your final reaction volume.
3 	**Add template DNA and primers**	Add your template DNA and primers to each tube for a final reaction volume of 50 µL.
4 	**Incubate reactions in a thermal cycler**	Cap each tube, mix, and then briefly centrifuge the contents.
5 	**Analyze with gel electrophoresis**	Analyze 10 µL using agarose gel electrophoresis. Use your PCR reaction immediately for down-stream applications, or store it at –20°C.

Component	50-µL rxn	Final Concentration
Autoclaved, distilled water	to 50 µL	–
AmpliTaq Gold® 360 Master Mix	25 µL	1X
360 GC Enhancer (optional)	5.0 µL*	10%

* Targets 65–75% GC, start with 5.0 µL/rxn. Targets > 75% GC, start with 10 µL/rxn. For increased specificity, add 1–2 µL.

Component	50-µL rxn	Final Concentration
10 µM forward primer	1.0 µL	0.2 µM
10 µM reverse primer	1.0 µL	0.2 µM
Template DNA	varies	< 1 µg/reaction

Step		Temperature (°C)	Time
Initial Denaturation		95°C	10 minutes
25–40 PCR Cycles	Denature	95°C	Amplicons > 2 kb: 15 seconds Amplicons ≤ 2 kb: 30 seconds
	Anneal	~55°C (depending on primer T_m)	30 seconds
	Extend	72°C	1 minute/kb
Final Extension		72°C	7 minutes
Hold		4°C	indefinitely