Invitrogen™ Platinum™ Green Hot Start PCR 2X Master Mix

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invitrogen

Print Options

Package contents

Catalog number	Size
13001-012	50 rxns
13001-013	200 rxns
13001-014	1000 rxns

Kit contents

Storage conditions

- Store all contents at –20°C.

Required materials

- Template: cDNA, gDNA, λDNA
- Forward and reverse gene-specific primers
- Invitrogen™ E-Gel™ General Purpose Gels, 1.2% (Cat. no. G5018-01)
- Invitrogen™ 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

- Platinum™ Green Hot Start PCR 2X Master Mix contains Platinum™ *Taq* DNA Polymerase in an optimized PCR buffer with Mg^{2+} and dNTPs. The master mix is supplemented with tracking dyes for direct loading of PCR products on gels.
- The master mix retains all features of the Platinum™ *Taq* DNA Polymerase.
- Specific binding of the anti-*Taq* antibody inhibits polymerase activity at ambient temperatures. Activity is restored after the initial denaturation step in PCR cycling at 94°C, providing an automatic "hot start" and offering increased sensitivity, specificity, and yield, while allowing reaction assembly at room temperature.
- Platinum™ GC Enhancer improves amplification of GC-rich targets.
- The tracking dyes (a blue dye and a yellow dye) in the master mix do not interfere with PCR performance and are compatible with downstream applications such as fluorescent automatic DNA sequencing, ligation, and restriction digestion.

Important guidelines

Click here for important PCR guidelines.

Online resources

Visit our product page for additional information and protocols. For support, visit thermofisher.com/techresources.

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

Enzyme characteristics

Hot-start:	Antibody
Length:	Up to 5 kb
Fidelity vs. *Taq*:	1X
Format:	Master mix

PCR 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. in 50-µL rxn
Water, Nuclease-free	to 25 µL	to 50 µL	to µL	—
Platinum™ Green Hot Start PCR 2X Master Mix	12.5 µL	25 µL	µL	1X*
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		<500 ng/rxn
Platinum™ GC Enhancer (*optional*)**	5 µL	10 µL	µL	20%

* 1X master mix contains a final concentration of 1.5 mM $MgCl_2$ and 0.2 mM of each dNTP.

** Recommended only for targets with >65% GC sequences.

PCR protocol

See page 2 for instructions to prepare and run your PCR experiment.

Optimization strategies

Click here for guidelines to optimize your PCR experiment.

Purchaser notification

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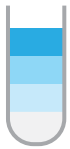
The example PCR procedure below shows appropriate volumes for a single **50-µL** reaction using GC-rich template DNA. For multiple reactions, prepare a master mix of common reaction components, then dispense appropriate volumes into each 0.2–0.5 mL PCR tube prior to adding template DNA and primers.

Steps	Action	Procedure details
1 	**Thaw reagents**	Thaw, mix, and briefly centrifuge each component before use. Avoid generating bubbles when mixing the Master Mix.
2 	**Prepare PCR master mix**	Add the following components to each PCR 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**	
5 	**Analyze with gel electrophoresis**	Analyze the sample using agarose gel electrophoresis. **Note:** The samples are ready for direct loading on the gels; addition of loading buffer is not needed. Use your PCR product immediately in down-stream applications, or store it at –20°C.

Component	50-µL rxn	Final conc.
Water, Nuclease-free	to 50 µL	—
Platinum™ Green Hot Start PCR 2X Master Mix	25 µL	1X
Platinum™ GC Enhancer (*optional*)*	10 µL	20%

*For targets with >65% GC sequences.

Mix and then briefly centrifuge the components.

Component	50-µL rxn	Final conc.
10 µM forward primer	1 µL	0.2 µM
10 µM reverse primer	1 µL	0.2 µM
Template DNA	varies	<500 ng/rxn

Cap each tube, mix, and then briefly centrifuge the contents.

Step		Temperature	Time
Initial denaturation		94°C	2 minutes
25–35 PCR cycles	Denature	94°C	30 seconds
	Anneal	~55°C (depending on primer T_m)	30 seconds
	Extend	72°C	1 minute/kb
Hold		4°C	indefinitely