

	Package contents	<p>Catalog number</p> <p>10966-018 10966-026 10966-034 10966-083</p> <p>Size</p> <p>120 rxns 300 rxns 600 rxns 5000 rxns</p>	Kit contents
	Storage conditions	<ul style="list-style-type: none"> Store all contents at -20°C. Template: cDNA, gDNA, λDNA Forward and reverse gene-specific primers Invitrogen™ 10 mM dNTP mix (Cat. no. 18427-088) Water, nuclease-free 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 Gel loading buffer 	
	Required materials	<ul style="list-style-type: none"> Invitrogen™ 10 mM dNTP mix (Cat. no. 18427-088) Water, nuclease-free 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 Gel loading buffer 	
	Timing	Varies depending on amplicon length	
	Selection guide	<p>PCR Enzymes and Master Mixes</p> <p>Go online to view related products.</p>	
	Product description	<ul style="list-style-type: none"> Platinum™ Taq DNA Polymerase is a recombinant Taq polymerase complexed with a proprietary antibody that blocks the 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. This enzyme has a non-template-dependent, terminal transferase activity that adds a single deoxyadenosine (A) to the 3' ends of PCR products. Like standard Taq, it has both 5' to 3' polymerase and 5' to 3' exonuclease activity, but lacks 3' to 5' exonuclease activity. 	
	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:** Separate components

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	—
10X PCR Buffer, – Mg	2.5 μL	5 μL	μL	1X
50 mM MgCl_2	0.75 μL	1.5 μL	μL	1.5 mM
10 mM dNTP mix	0.5 μL	1 μL	μL	0.2 mM each
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
KB Extender (optional)*	varies	varies	μL	3–9%
Platinum™ Taq DNA Polymerase	0.1 μL	0.2 μL	μL	2 U/rxn

* Recommended for targets >5 kb or with >65% GC sequences.

PCR protocol

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

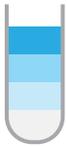
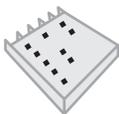
Optimization strategies

Click here for guidelines to optimize your PCR experiment.

Purchaser notification

Click here for Limited warranty, Disclaimer, and Licensing information.

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, 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.																					
2 	Prepare PCR master mix	<p>Add the following components to each PCR tube.</p> <p>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.</p> <table border="1"> <thead> <tr> <th>Component</th> <th>50-μL rxn</th> <th>Final conc.</th> </tr> </thead> <tbody> <tr> <td>Water, nuclease-free</td> <td>to 50 μL</td> <td></td> </tr> <tr> <td>10X PCR Buffer, – Mg</td> <td>5 μL</td> <td>1X</td> </tr> <tr> <td>50 mM MgCl₂</td> <td>1.5 μL</td> <td>1.5 mM</td> </tr> <tr> <td>10 mM dNTP mix</td> <td>1 μL</td> <td>0.2 mM each</td> </tr> <tr> <td>KB Extender (optional)*</td> <td>1.5–4.5 μL</td> <td>3–9%</td> </tr> <tr> <td>Platinum™ Taq DNA Polymerase</td> <td>0.2 μL</td> <td>2 U/rxn</td> </tr> </tbody> </table> <p>*For targets >5 kb or with >65% GC sequences. Mix and then briefly centrifuge the components.</p>	Component	50-μL rxn	Final conc.	Water, nuclease-free	to 50 μL		10X PCR Buffer, – Mg	5 μL	1X	50 mM MgCl ₂	1.5 μL	1.5 mM	10 mM dNTP mix	1 μL	0.2 mM each	KB Extender (optional)*	1.5–4.5 μL	3–9%	Platinum™ Taq DNA Polymerase	0.2 μL	2 U/rxn
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3 	Add template DNA and primers	<p>Add your template DNA and primers to each tube for a final reaction volume of 50 μL.</p> <table border="1"> <thead> <tr> <th>Component</th> <th>50-μL rxn</th> <th>Final conc.</th> </tr> </thead> <tbody> <tr> <td>10 μM forward primer</td> <td>1 μL</td> <td>0.2 μM</td> </tr> <tr> <td>10 μM reverse primer</td> <td>1 μL</td> <td>0.2 μM</td> </tr> <tr> <td>Template DNA</td> <td>varies</td> <td><500 ng/rxn</td> </tr> </tbody> </table> <p>Cap each tube, mix, and then briefly centrifuge the contents.</p>	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									
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5 	Add gel loading buffer and analyze with gel electrophoresis	<p>Add gel loading buffer to 10 μL of PCR sample, mix, and briefly centrifuge the contents. Analyze the sample using agarose gel electrophoresis. Use your PCR product immediately in down-stream applications, or store it at –20°C.</p>																					