

	Catalog number	Size	
Package contents	12368010	100 reactions	Kit contents
	12368050	500 reactions	
	12368250	5 × 500 reactions	

Storage conditions	<ul style="list-style-type: none"> Store all contents at -20°C.
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Required materials	Click here for required materials
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- Platinum™ SuperFi™ II DNA Polymerase is a proofreading DNA polymerase that combines high fidelity with Platinum™ hot-start technology and universal primer annealing. It is ideal for cloning, mutagenesis, and other applications.
- Platinum™ SuperFi™ II PCR Master Mix is a ready-to-use mixture of DNA polymerase, salts, magnesium, and dNTPs for efficient PCR amplification, which retains all the features of the Platinum™ SuperFi™ II DNA Polymerase.
- The annealing temperature with Platinum™ SuperFi™ II DNA Polymerase is 60°C . Proprietary additives in the reaction buffer stabilize primer-template duplexes during the annealing step, and contribute to increased specificity without the need to optimize annealing temperature for each primer pair.
- Due to proprietary additives in the reaction buffer, Platinum™ SuperFi™ II DNA Polymerase shows efficient amplification of both AT and GC rich targets. Additional DNA melting agents are not required for GC-rich PCR (up to 75% GC).
- Platinum™ hot-start technology inhibits DNA polymerase activity at ambient temperatures, allowing room temperature reaction setup and storage of pre-assembled PCR reactions. Enzyme activity is restored after the initial denaturation step.
- Platinum™ SuperFi™ II DNA Polymerase has 5' to 3' polymerase and 3' to 5' exonuclease activities, but lacks 5' to 3' exonuclease activity. It produces blunt end DNA products.

Product description	
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Selection guide	PCR Enzymes and Master Mixes Go online to view related products.
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Online resources	Visit our product page for additional information and protocols. For support, visit thermofisher.com/support .
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Enzyme characteristics

Hot-start:	Antibody
Length:	Up to 20 kb
Fidelity vs. <i>Taq</i>:	>300X
Timing:	Varies depending on amplicon length
Format:	Master Mix

PCR setup

Component	Final concentration	20- μL rxn	50- μL rxn
2X Platinum™ SuperFi™ II PCR Master Mix ^[1]	1X	10 μL	25 μL
Forward primer	0.5 μM ^[2]	x μL	x μL
Reverse primer	0.5 μM ^[2]	x μL	x μL
Template DNA	0.1–10 ng plasmid (5–100 ng genomic DNA)	x μL	x μL
Water, nuclease-free	—	to 20 μL	to 50 μL

^[1] Provides 1.75 mM MgCl_2 in 1X concentration.

^[2] Reduce the primer concentration to 0.2 μM final for amplification of >5 kb targets from genomic DNA and for multiplex reactions.

PCR protocol

See page 2 to prepare and run your PCR experiment.

Important guidelines

[Click here for important PCR guidelines.](#)

Optimization strategies and troubleshooting

[Click here for guidelines to optimize your PCR experiment.](#)

[Click here for guidelines to troubleshoot your PCR experiment.](#)

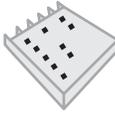
Purchaser notification

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Prepare and run PCR

The example PCR procedure below shows appropriate volumes for a single 20- μ L or 50- μ L 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-mL or 0.5-mL PCR tube before adding template DNA and primers.

Steps	Action	Procedure details																										
1 	Thaw reagents	Thaw, mix, and briefly centrifuge each component before use.																										
2 	Prepare reaction mix with template DNA and primers	<p>Add the following components to each PCR tube.</p> <p>Note: Consider the volumes for all components in reaction mix to determine the correct amount of water required to reach your final reaction volume.</p> <table border="1"> <thead> <tr> <th>Component</th> <th>Final concentration</th> <th>20-μL rxn</th> <th>50-μL rxn</th> </tr> </thead> <tbody> <tr> <td>2X Platinum™ SuperFi™ II PCR Master Mix^[1]</td> <td>1X</td> <td>10 μL</td> <td>25 μL</td> </tr> <tr> <td>Forward primer</td> <td>0.5 μM^[2]</td> <td>x μL</td> <td>x μL</td> </tr> <tr> <td>Reverse primer</td> <td>0.5 μM^[2]</td> <td>x μL</td> <td>x μL</td> </tr> <tr> <td>Template DNA</td> <td>0.1–10 ng plasmid (5–100 ng genomic DNA)</td> <td>x μL</td> <td>x μL</td> </tr> <tr> <td>Water, nuclease-free</td> <td>—</td> <td>to 20 μL</td> <td>to 50 μL</td> </tr> </tbody> </table> <p>^[1] Provides 1.75 mM MgCl₂ in 1X concentration. ^[2] Reduce the primer concentration to 0.2 μM final for amplification of >5 kb targets from genomic DNA and for multiplex reactions.</p> <p>Cap each tube, mix, and then briefly centrifuge the contents.</p>	Component	Final concentration	20- μ L rxn	50- μ L rxn	2X Platinum™ SuperFi™ II PCR Master Mix ^[1]	1X	10 μ L	25 μ L	Forward primer	0.5 μ M ^[2]	x μ L	x μ L	Reverse primer	0.5 μ M ^[2]	x μ L	x μ L	Template DNA	0.1–10 ng plasmid (5–100 ng genomic DNA)	x μ L	x μ L	Water, nuclease-free	—	to 20 μ L	to 50 μ L		
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<p>4</p> 	<p>Add gel loading buffer and analyze with gel electrophoresis</p>	<p>Add gel loading buffer to 10 µL of PCR product, mix, and briefly centrifuge the contents.</p> <p>Note: For optimal separation using E-Gel™ agarose gels, dilute the sample 2- to 20-fold.</p> <p>Analyze the sample using agarose gel electrophoresis.</p> <p>Use your PCR product immediately in down-stream applications, or store it at –20°C.</p>																						