



Pfu 2x Master Mix

Manual

Catalog #	3326
Package Size	200 Reactions
Volume	5 ml



Important!

-20°C Storage Required

- * Immediately inspect packages
- * Freeze upon receipt



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Description:

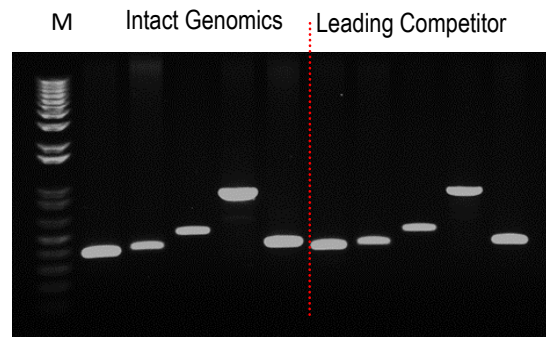
Intact Genomics (ig®) *Pfu* DNA Polymerase 2x Master Mix is a ready to use premix which contains *Pfu* DNA polymerase, dNTPs, MgCl₂ and stabilizers with optimized reaction buffer. It has been optimized for routine PCR applications. *Pfu* DNA polymerase is a heat stable DNA polymerase which has 5' → 3' DNA polymerase and 3' → 5' exonuclease (proofreading) activities. *Pfu* DNA polymerase retains the high fidelity, sensitivity and processivity with an error rate six-fold lower than *Taq* DNA polymerase, and significantly lower than the error rates of most other proofreading enzymes or DNA polymerase mixtures (1). This product is supplied with the unique Intact Genomics 5x Magic Enhancer that enables efficient amplification of GC rich templates up to 84%.

Product Source:

E. coli strain expressing a *Pfu* DNA Polymerase gene from *Pyrococcus furiosus*.

Pfu DNA Polymerase Comparison Data:

We repeatedly compare our *Pfu* Polymerase side-by-side with a leading competitor for PCR assay. Our enzyme is better than the competitor. A typical gel picture is shown below:



Applications:

- Routine PCR
- Primer extension
- Colony PCR
- Genotyping
- Efficient for amplifying high GC content template DNA with Magic Enhancer

Product Components:

- *Pfu* 2x Master Mix
- 5x Magic Enhancer

Storage Temperature:

-20 °C

1x Master Mix Composition:

- 10 mM Tris-HCl pH 9.0
- 50 mM KCl
- 1.5 mM MgCl₂
- 0.2 mM dNTPs
- 5% Glycerol
- 0.08% Igepal CA 630
- 0.05% Tween-20
- 100 Units/ml *Pfu* DNA Polymerase

Protocol:

- 1) Prepare a reaction mix according to the following table:

PCR Reaction Set Up:	
Template DNA	1-50 ng
Forward primer (5 μ M)	1.0 μ l
Reverse primer (5 μ M)	1.0 μ l
<i>Pfu</i> 2x master mix	10.0 μ l
5x Magic Enhancer (optional)	4.0 μ l
H ₂ O up to	20.0 μ l

- 2) Mix the reaction mixture thoroughly.
- 3) Program the thermal cycler according to the manufacturer's instructions.
- 4) A typical PCR cycling program is outlined in the following table:

PCR Cycling Conditions			
Steps	Temp.	Time	Cycles
Initial Denaturation	95 °C	3 min	1
Denaturation	95 °C	30 sec	25-40
Annealing	50-66 °C	30 sec	
Extension	72 °C	1 min/kb	
Final Extension	72 °C	5 min	1
Hold	4-12 °C	∞	

- 5) Place the PCR tubes in the thermal cycler and start the cycling program.
- 6) Analyze 5 μ l of PCR products by agarose gel electrophoresis.

Related Products:

- *Taq* DNA Polymerase (Cat.# 3243)
- *Taq* DNA Polymerase 2x Premix with Dye (Cat.# 3249)

Ordering Information:

- Order online within the USA. Place orders on **www.intactgenomics.com** using our secure Shopping Cart.
- Order by email, phone, or fax.
Email: **sales@intactgenomics.com**
Phone: (314) 942-3655 | Toll-free : 855-835-7172 | Fax: (314) 942-3656
- Order via our distributors.

Reference:

1. Frey, B. and Suppman, B. (1995). *BioChemica*. 2, 34-35.

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Our hours are Monday - Friday, 8AM to 5PM, U.S. Central Standard Time.

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