Hot Start *Taq* 2x Master Mix

Manual

Catalog #	**3296**
Package Size	500 reactions
Volume	50µl

Important!

-20°C Storage Required

* Immediately inspect packages
* Freeze upon receipt

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Intact Genomics, Inc.

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Description:

Intact Genomics (ig®) Hot start *Taq* DNA Polymerase 2x Master Mix is ready to use premix which contains hot start *Taq* DNA polymerase, dNTPs, $MgCl_2$ and stabilizers with optimized reaction buffer. It has been optimized for routine PCR applications. Hot start *Taq* is a thermostable DNA polymerase that possesses a 5' -> 3' polymerase activity (3, 4). Hot Start *Taq* DNA Polymerase is chemically modified that leads to complete inactivation of the polymerase until the initial heat activation step at the start of PCR. Hot start PCR reduces non-specific amplification during setup stages of the reaction and helps increase PCR specificity and sensitivity. This product is supplied with the unique Intact Genomics 5x Magic Enhancer that enables efficient amplification of GC rich templates up to 84%.

Applications:

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

Product Components and Storage:

- Hot Start *Taq* 2x Master Mix
- 5x Magic Enhancer
- -20 °C

1x Master Mix Composition:

- 10 mM Tris-HCl pH 9.0
- 50 mM KCl
- 1.5 mM $MgCl_2$
- 0.2 mM dNTPs
- 5% Glycerol
- 0.08% Igepal CA 630
- 0.05% Tween-20
- 100 units/ml Hot Start *Taq* Polymerase

Protocol:

1. Prepare a reaction mix according to the following table:

PCR Reaction Set Up:	
Template DNA	1-50 µg
Forward Primer (5 µM)	2.5 µl
Reverse Primer (5 µM)	2.5 µl
Hot start *Taq* 2x master mix	25 µl
5x Magic Enhancer (optional)	10 µl
H_2O up to	50.0 µl

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	15 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	5-10 min	1
Hold	4-12 °C	∞	

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

Related Products:

- *Taq* DNA Polymerase (Cat.# 3243)
- *Taq* DNA Polymerase 2x Master Mix (Cat.# 3249, 3250)
- Hot Start *Taq* DNA Polymerase (Cat.# 3293)
- i7® Hot Start High-Fidelity DNA Polymerase 2x Master Mix (Cat.# 3281, 3283)

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.

References:

1. Chien, A., Edgar, D.B. and Trela, J.M. (1976). J. Bact. 127, 1550-1557.

2. Lawyer, F.C. et al. (1993). PCR Methods and Appl. 2, 275-287.

3. Longley, M.J., Bennett, S.E and Mosbaugh D.W. Nucleic Acids Res.18, 7317-7322.

4. Lyamichev, V., Brow, M.A. and Dahlberg, J.E. (1993). Science. 260, 778-783.

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

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