Intact Genomics®

Taq DNA Polymerase 2x Premix with Dye

Catalog #	3248	3249
Package Size	100 reactions	500 reactions
Volume	2.5 ml	12.5 ml
Concentration	N/A	

Description

Taq DNA Polymerase 2x master mix is ready to use premix which contains *Taq* DNA Polymerase, dNTPs, $MgCl_2$ and stabilizers with optimized reaction buffer. It has been optimized for routine PCR applications. *Taq* is a thermostable DNA polymerase that possesses a 5′→3′ polymerase activity (1, 2) and a 5′ flap endonuclease activity (3, 4). 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 Includes

1) Taq DNA Polymerase 2x Premix with Dye
2) 5x Magic Enhancer

Storage Temperature

–20 °C

1x Premix 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
50 Units/ml *Taq* Polymerase.

Protocol

1. Thaw primer solutions, 5x Magic Enhancer (if required) and mix thoroughly before use.
2. Prepare a reaction mix according to the following table:

PCR Reaction Set Up:	
Template	1-50 ng
Forward Primer (3.2 µM)	1.0 µl
Reverse Primer (3.2 µM)	1.0 µl
5x Magic Enhancer (optional)	4.0 µl
Taq DNA Polymerase 2x Premix with Dye	10.0 µl
H_2O up to	20.0 µl

3. Mix the reaction mixture thoroughly.
4. Add template DNA to the individual PCR tubes containing the reaction mixture.
5. Program the thermal cycler according to the manufacturer's instructions. 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	25-35
Annealing	55-60 °C	30 sec	
Extension	72 °C	1 min/kb	
Final Extension	72 °C	5-10 min	1
Hold	4 °C	∞	

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

Reference

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. (1990). Nucleic Acids Res. 18, 7317-7322.
4. Lyamichev, V., Brow, M.A. and Dahlberg, J.E. (1993). Science. 260, 778-783.