AccuPower® HotStart *ProFi Taq* PCR PreMix

[Cat. No.] Please refer to the **Ordering Information**

Introduction

AccuPower® HotStart *ProFi Taq* PCR PreMix uses HotStart *ProFi Taq* DNA Polymerase maximizes PCR efficiency by removing PCR inhibitor, and it allows amplification of long template DNA with high fidelity. Moreover, by applying HotStart technology, this prevents the formation of mis-primed products and primer-dimers during the reaction set up process resulting in improved PCR specificity.
This product contains vacuum-dried components for PCR including, HotStart *ProFi Taq* DNA Polymerase, dNTPs, reaction buffer, stabilizer, and tracking dye. It simplifies preparation of reaction mixture by adding template DNA and primers without any extra process. After the reaction, samples can be applied directly on agarose gel for analysis.

Applications

- High specificity PCR
- Long-range amplification from genomic DNA
- High yield and high sensitivity PCR

Features & Benefits

- Specificity: Minimized amplification of non-specific PCR products, maximized reaction efficiency, and effective amplification even with a small amount of template DNA through the application of HotStart technology.
- Long-range PCR: Effective amplification of large genomic DNA fragments up to 20 kb of human DNA.
- User-friendly: Reactants are individually packaged in each of the PCR tubes, it allows any user simply perform PCR by adding template DNA and primers. The tube also has tracking dye and sedimentation agents for electrophoresis, so sample loading buffer is not required.
- Stability: Included stabilizer provides prolonged storage and increased stability compared to solution-type products.
- Reproducibility: Reproducible experimental results with minimized lot-to-lot variation under ISO 9001 quality system.

Composition

Composition	Concentration
HotStart *ProFi Taq* DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 250 μM
Reaction buffer with 1.5 mM $MgCl_2$	1X
Stabilizer and tracking dye	O

*** Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Specifications

HotStart *ProFi Taq* DNA Polymerase	
5' to 3' exonuclease activity	Yes
3' to 5' exonuclease activity	Yes
3'– A overhang	Yes
Fragment size	Up to 20 kb

Storage

Store at -20°C. This product can be stable up to 2 years in a freezer.

Online Resources

Korean **English**

Visit our **product page** for additional information and protocols.

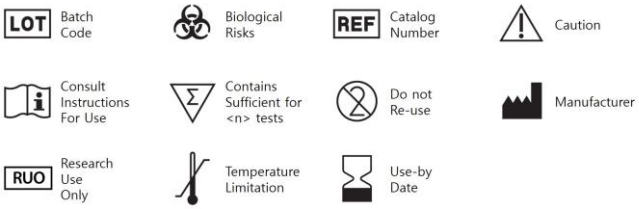
Ordering Information

Description			Cat. No.
0.2 ml thin-wall 8-tube strips with attached cap	96 tubes	20 μl/rxn	K-2640
	480 tubes	20 μl/rxn	K-2641
	96 tubes	50 μl/rxn	K-2642
	480 tubes	50 μl/rxn	K-2643

Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



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Experimental Procedures

Step 1: Preparation of reaction mixture

1. Add template DNA, primers and nuclease-free water into *AccuPower*® HotStart *ProFi Taq* PCR PreMix tubes to a total volume of 20 µl or 50 µl. Do not calculate the dried pellet.

- Preparation of reaction mixture

Components	20 µl reaction	50 µl reaction
Template DNA	1-500 ng	1-500 ng
Forward primer (10 pmol/µl)	0.5-2 µl	0.5-2 µl
Reverse primer (10 pmol/µl)	0.5-2 µl	0.5-2 µl
Nuclease-free water	Variable	Variable
Total volume	20 µl	50 µl

2. Dissolve the vacuum-dried pellet completely by tapping or pipetting, and briefly spin down. If you are using the BIONEER's *ExiSpin*™ Vortex/Centrifuge, follow the recommended settings below.

Step	Setting		
Vortex	High	15 sec	4 cycles
Spin	1,500 rpm	5 sec	

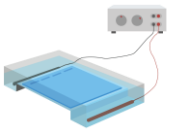
Step 2: Perform the reaction in a thermal cycler

3. Perform the reaction under the following conditions.

Step	Temperature	Time	Cycles
Pre-denaturation	95°C	5 min	1 cycle
Denaturation	95°C	15-30 sec	
Annealing	45-65°C	15-30 sec	25-35 cycles
Extension	72°C	1 min/kb	
Final extension	72°C	3-5 min	1 cycle

* **Note:** The annealing temperature depends on the melting point of the primers.

Step 3: Analyze with gel electrophoresis



4. After the reaction, maintain the reaction mixture at 4°C. The samples can be stored at -20°C until use.

5. Load 5 µl of PCR product samples on agarose gel without adding a loading-dye mixture, and perform gel electrophoresis for analysis.

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