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Single Gene qPCR Primer Set targets the gene of interest, and enable it to amplify for accurate gene expression analysis.

Ⅰ. Introduction

Single Gene qPCR Primer Set is designed by primer Blast(NCBI) and Bioneer's bioinformatics tool for dsDNA binding dye type. All primers are designed and validated in accordance with the MIQE (Minimum Information for publication of quantitative real-time PCR Experiments) guidelines [1].

[1] Bustin, S.A., et al. 2009. The MIQE Guidelines: Minimum Information for Publication of Quantitative Real-Time PCR Experiments, Clinical Chemistry 55:4, 611-622.

Single Gene qPCR Primer Set is optimized for utilization of *AccuPower*® 2X *GreenStar*™ qPCR Master Mix (K-6251, Bioneer) and *Exicycler*™ 96 ver. 4 (A-2060-1, Bioneer) for the best result.

Ⅱ. Shipping and Storage

Shipping Conditions

Single Gene qPCR Primer Set is shipped at ambient temperature unless there is exposure to conditions that may affect product quality. Since all the primer sets have been dried, the products are thermo-stable. If required a customer can request dry-ice shipment at an extra charge.

Recommended storage

Single Gene qPCR Primer Set may be stored at ambient temperature (15-20℃). Direct sunlight during long-term storage should be avoided. Once dispensed, the primers should be stored at -20℃. Repeated freeze-thaw cycles (more than once) are not recommended.

Ⅲ. Product Description

Product contents

Cat No.	Product description	Product contents	Amount
S-6042-S200	Single Gene qPCR Primer Set	Forward primer	200 rxn/tube
		Reverse primer	200 rxn/tube

Each of forward and reverse primer is supplied for 200 rxn in two separate single tubes.
Volume for 6pmole/μl is 500 μl of nuclease-free water.

Ⅳ. Protocol

Required materials

- Template DNA
- qPCR reagent (*AccuPower*® 2X *GreenStar*™ qPCR Master Mix (K-6251, Bioneer) is recommended.)
- qPCR instrument (*Exicycler*™ 96 Real-Time Quantitative Thermal Block (A-2060, Bioneer) is recommended.)
- High quality, nuclease-free water
- Pipette, Nuclease-free pipette tips and tubes
- Plastic plate for Real-time PCR

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Procedure

1) Dissolving forward and reverse primers in 500 µl of nuclease-free water for 6 pmoles/µl.
2) The recommended volume of each component:

Components:	Amount per reaction	
Template DNA	Variable	Variable
AccuPower® 2X *GreenStar*™ qPCR Master Mix	25 µl	10 µl
Single Gene qPCR Primer (Forward)	2.5 µl	1 µl
Single Gene qPCR Primer (Reverse)	2.5 µl	1 µl
Nuclease-free water	Adjust to 50 µl	Adjust to 20 µl
Total volume	50 µl	20 µl

3) Dispense the PCR mixture into each well of a qPCR plate.
4) Seal the plate with Adhesive Optical Sealing Film (3111-4110, Bioneer).
5) Spin down the plate.
6) Load the plate into the qPCR instrument.
7) Run according to the following qPCR program settings

Step	Condition		Cycle
	Temperature	Time	
Pre-Denaturation	95℃	10 min	1
Denaturation	95℃	5 sec	40
Annealing	58℃*	25 sec	
Extension	72℃	30 sec	
Detection	Scan		
Final extension	65℃	5 min	1
Melting	65℃ to 95℃	1 sec	-

* Annealing temperature for primers is 58℃.

8) When reaction is complete, perform data analysis.

V. Explanation of Symbols

	**Consult Instruction For Use**		**Caution, Consult accompanying documents**		**DO NOT REUSE**		**USE BY**

VI. 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. All information provided here is subject to change without notice.