AccuPower® qPCR Array System: Human 5-plex Reference qPCR primer and probe set (V1/2021-10-12)

[Cat. No.] S-6043-SH0

Introduction

AccuPower® qPCR Array System: Human 5-plex Reference qPCR primer and probe set is a mixture containing validated primers and probes, which can perform 5-reference gene screening in a single reaction. This product consists of 3 tubes – each for set A, B, and C. All primer and probe sets are designed in accordance with MIQE (Minimum Information for Publication of Quantitative Real-Time PCR Experiments) guidelines*, and the results can be used for SCI paper publication. Each set contains 5 dyes - FAM, TEXAS-RED, CY5, TET, and TAMRA. With our complete set, 15 typical/most used reference genes can be detected, which are provided in 3 qPCR tubes each with 5 genes. Then, the user can select most appropriate reference gene with low amount of template genes. Reference gene screening can be performed easily and quickly with the 3 sets and no additional primer/probe setting for multiplex is required. This product is optimized for utilization of *AccuPower*® Plus *DualStar*™ qPCR Master Mix (Cat. No. K-6603) and *Exicycler*™ 96 ver. 4 (Cat. No. A-2060-1) that gives the best result.

* 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.

Features & Benefits

- Target-specific primer design using primer blast and our bioinformatics tool
- Exclusion of self-primer-dimer formation sequence
- Identification of single peak in the dissociation curve
- Short amplicon size of 80-160bp
- Wide amplification range of copies of about 10^2-10^7
- qPCR amplification efficiency of 90-110% in compliance with the MIQE Guidelines

Components

Components		Amount
AccuPower® qPCR Array System: Human 5-plex Reference qPCR primer and probe set	A set	20 rxn x 1 ea
	B set	20 rxn x 1 ea
	C set	20 rxn x 1 ea

Storage

- This product is lyophilized and shipped at room temperature.
- Store at ambient temperature (15-20°C) without direct sunlight for long term storage. Once dispensed, primers should be stored at 20°C and repeated freeze and thaw cycles (more than once) are not recommended.

Gene Table

#	Gene Symbol	Description
A set	ACTB	Actin, beta
	B2M	Beta-2-microglobulin
	TFRC	Transferrin receptor
	GUSB	Glucuronidase, beta
	HPRT1	Hypoxanthine phosphoribosyltransferase 1
B set	G6PD	Glucose-6-phosphate dehydrogenase
	PPIA	Peptidylprolyl isomerase A (cyclophilin A)
	RPLP0	Ribosomal protein, large, P0
	TUBB	Tubulin, beta class I
	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
C set	RPL13A	Ribosomal protein L13a
	PGK1	Phosphoglycerate kinase 1
	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta
	ALAS1	5'-aminolevulinate synthase 1
	TBP	TATA box binding protein

Online Resources

Korean **English**

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

Ordering Information

Description			Cat. No.
AccuPower® qPCR Array System: Human 5-plex Reference qPCR primer and probe set	A set	20 rxn/tube	S-6043-SH0
	B set	20 rxn/tube	
	C set	20 rxn/tube	

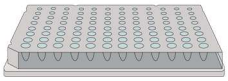
Notice

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

Caution · Consult Instructions For Use · Do not Re-use · Use-by Date

Experimental Procedures

<table>
<tr><th colspan="2">Steps</th><th>Procedure Details</th></tr>
<tr><td>1</td><td> 
Preparation of primers</td><td>1. Add 100 µl of nuclease-free water into AccuPower® qPCR Array System: Human 5-plex Reference qPCR primer and probe set tubes (A, B, and C), which can be used for 20 reactions.
* Note: This product can be diluted according to the user's purpose.</td></tr>
<tr><td>2</td><td> 
Preparation of reaction mixture</td><td>2. Add template DNA, primer and probe set, nuclease-free water, and AccuPower® Plus DualStar™ qPCR Master Mix (K-6603, not provided) into real-time PCR plate to make a total volume of 50 µl.
• Preparation of reaction mixture
<table>
<tr><th>Components</th><th>50 µl reaction</th></tr>
<tr><td>AccuPower® Plus DualStar™ qPCR Master Mix</td><td>25 µl</td></tr>
<tr><td>Template DNA</td><td>10 pg to 100 ng</td></tr>
<tr><td>Human 5-plex Reference qPCR primer and probe set</td><td>5 µl</td></tr>
<tr><td>Nuclease-free water</td><td>Variable</td></tr>
<tr><td>Total volume</td><td>50 µl</td></tr>
</table>
3. Seal real-time PCR plate with adhesive optical sealing film (3111-4110, not provided) and briefly spin down.</td></tr>
<tr><td>3</td><td> 
Real-time PCR</td><td>4. Perform the reaction under the following conditions.
<table>
<tr><th>Step</th><th>Temperature</th><th>Time</th><th>Cycles</th></tr>
<tr><td>Pre-denaturation</td><td>95°C</td><td>10 min</td><td>1 cycle</td></tr>
<tr><td>Denaturation</td><td>95°C</td><td>5 sec</td><td></td></tr>
<tr><td>Annealing/Extension</td><td>58°C</td><td>15 sec</td><td>45 cycles</td></tr>
<tr><td>Detection</td><td colspan="2">Scan</td><td></td></tr>
</table>
5. After the reaction, perform data analysis.</td></tr>
</table>