AccuPower® qPCR Array System: Customized qPCR panel kit (96 well plate)

(V1/2021-10-12)

[Cat. No.] S-6041

Introduction

BIONEER offers customized 96-well plates coated with target primers, reference genes, requested and control primers applicable to intercalating dye-based method. This product offers specific reaction, high sensitivity, and improved stability. *AccuPower*® Customized qPCR Panel Kit is an easy-to-use product and it simplifies preparation of real-time PCR mixture as the user needs to only add template DNA, 2X Master Mix (intercalating dye type), and nuclease-free water. This product also provides highly reproducible results. All primers are designed and validated in accordance with the MIQE (Minimum Information for Publication of Quantitative Real-Time PCR Experiments) guidelines*.

* 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

- Customized service: Customized panels only consist of genes the user's order
- Convenience: Simplified protocol where the user only has to add the master mix for analysis to immediately start the experiment
- Economical: Reduced cost and time for primer design, synthesis and efficiency verification

Components

Components	S-6041
Customized qPCR Panel Kit (96 well plate)	1 plate
Adhesive Optical Sealing Film (Cat.No. 3111-4110)	1 sheet per plate
(Optional) Control RNA (100 ng/ µl)	5 µl for 20 plates

*** Note:** When reverse transcription control (RTC) selected, primers are included in RTC wells and control RNA is provided in a separated tube.

Storage

- This product is shipped at ambient temperature.
- Store at room temperature. If stored in the recommended temperature, this product will be stable for 2 years after the delivery date.

Online Resources

Korean **English**

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

Ordering Information

Description		Minimum Order Quantity	Cat. No.
AccuPower® qPCR Array system: Customized qPCR panel kit	1-16 genes	3 plates	S-6041
	17-32 genes	4 plates	
	33-96 genes	9 plates	

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

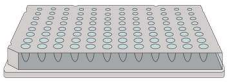
Plate Map

	1	2	3	4	5	6	7	8	9	10	11	12
A	Gene-1	Gene-9	Gene-17	Gene-25	Gene-33	Gene-41	Gene-49	Gene-57	Gene-65	Gene-73	Gene-81	ACTB
B	Gene-2	Gene-10	Gene-18	Gene-26	Gene-34	Gene-42	Gene-50	Gene-58	Gene-66	Gene-74	Gene-82	B2M
C	Gene-3	Gene-11	Gene-19	Gene-27	Gene-35	Gene-43	Gene-51	Gene-59	Gene-67	Gene-75	Gene-83	GAPDH
D	Gene-4	Gene-12	Gene-20	Gene-28	Gene-36	Gene-44	Gene-52	Gene-60	Gene-68	Gene-76	Gene-84	HPRT1
E	Gene-5	Gene-13	Gene-21	Gene-29	Gene-37	Gene-45	Gene-53	Gene-61	Gene-69	Gene-77	Gene-85	RPL13A
F	Gene-6	Gene-14	Gene-22	Gene-30	Gene-38	Gene-46	Gene-54	Gene-62	Gene-70	Gene-78	Gene-86	RTC
G	Gene-7	Gene-15	Gene-23	Gene-31	Gene-39	Gene-47	Gene-55	Gene-63	Gene-71	Gene-79	Gene-87	GDC
H	Gene-8	Gene-16	Gene-24	Gene-32	Gene-40	Gene-48	Gene-56	Gene-64	Gene-72	Gene-80	Gene-88	PPC

Table 1. Layout example of Customized qPCR panel kit.

Copyright 2021 BIONEER Corporation. All Rights Reserved.

Experimental Procedures

<table>
<tr><th colspan="2">Steps</th><th>Procedure Details</th></tr>
<tr><td>1</td><td> 
Preparation of reaction mixture</td><td>1. Prepare template DNA, AccuPower® 2X GreenStar™ qPCR Master Mix (K-6251, not provided), and nuclease-free water in a tube to make a total volume of 50 µl as described in following table.
<table>
<tr><th>Components</th><th>50 µl reaction</th></tr>
<tr><td>AccuPower® 2X GreenStar™ qPCR Master Mix</td><td>25 µl</td></tr>
<tr><td>Template DNA</td><td>5 pg-100 ng</td></tr>
<tr><td>Nuclease-free water</td><td>Variable</td></tr>
<tr><td>Total volume</td><td>50 µl</td></tr>
</table></td></tr>
<tr><td>2</td><td> 
Resuspension of primers</td><td>2. Carefully remove the covered film of panel and dispense 50 µl of reaction mixture into each well of AccuPower® qPCR Array System: Customized qPCR panel kit.
* Note: Change pipette tips following each pipetting step to avoid cross-contamination among the wells.

3. Seal the plate with adhesive optical sealing film and briefly spin down.

4. Then, completely mix by vortexing to resuspend lyophilized primers and spin down again.
* Note: Before start, check carefully if there are residues on the film.</td></tr>
<tr><td>3</td><td> 
Real-time PCR</td><td>5. 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 rowspan="3">40 cycles</td></tr>
<tr><td>Annealing</td><td>58°C</td><td>25 sec</td></tr>
<tr><td>Extension</td><td>72°C</td><td>30 sec</td></tr>
<tr><td>Detection</td><td colspan="2">Scan</td><td></td></tr>
<tr><td>Final extension</td><td>65°C</td><td>5 min</td><td>1 cycle</td></tr>
<tr><td>Melting</td><td>65-95°C</td><td>1 sec</td><td>-</td></tr>
</table>
6. After the reaction, perform data analysis.</td></tr>
<tr><td></td><td> 
Control primers</td><td>1) Reverse Transcription Control (RTC)
- RTC primer is for the reverse transcription test.
- Synthesize cDNA from 300 ng of the control RNA that we provided and add it into the RTC well. (Not your template)
- The value of Ct^{RTC} should be 25 ± 2. at 1 µl cDNA template from 300 ng control RNA.

2) Genomic DNA Control (GDC)
- GDC primer is for the detection of non-transcribed genomic DNA contamination.
- Add pre-mixture (your template, 2X Master Mix and nuclease free water) into the GDC well.
- If the value of Ct^{GDC} is less than 35, gDNA contamination might have occurred in your RNA samples. In this case, you ought to conduct an additional DNase treatment to clean up your samples.

3) Positive PCR Control (PPC)
- PPC primer is for the PCR test.
- The PPC well contains positive template and primer, so just add 2X Master Mix and nuclease-free water into the PPC well.
- The value of Ct^{PPC} should be referred to the quick manual provided together.</td></tr>
</table>

Copyright 2021 Bioneer Corporation. All Rights Reserved.