AccuPower® qPCR Array System: Mouse Immune qPCR Panel Kit

(V0/2021-10-12)

[Cat. No.] S-6042-PM2

Introduction

BIONEER offers 96-well plates coated with 88 immune biomarkers, reference 5 genes, and 3 control primers. Mouse Immune qPCR Panel Kit is an easy-to-use product as it simplifies preparation of real-time PCR mixture by making the user add the template DNA, 2X Master Mix (intercalating dye type), and nuclease-free water only. 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

- Fidelity: qPCR primer with qPCR efficiency of 90-110%, with guaranteed detection limit of 100 copies.
- User-friendly: Simplified procedure starting just by adding the template and Master Mix you want to analyze
- Economic: Reduced time and cost of primer design, synthesis and efficiency assays.

Components

Components	Amount
Mouse Immune qPCR Panel Kit (96 well plate)	1 plate
Adhesive Optical Sealing Film (Cat.No. 3111-4110)	1 sheet per plate

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		Cat. No.
AccuPower® qPCR Array System: Mouse Immune qPCR Panel Kit	96 genes	S-6042-PM2
AccuPower® qPCR Array System: Single gene qPCR Primer Set	200 rxn	S-6042-S200

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.

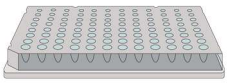
Explanation of Symbols

Plate Map

	1	2	3	4	5	6	7	8	9	10	11	12
A	Cd3e	Itgax	Il2rb	Cd36	Cd69	Ifnb1	Il2	Ifnar2	Jun	Tlr8	Cd19	Actb
B	Cd8a	H2-Ea-ps	Il7r	Cd163	Mx1	Ifih1	Il4	Ccl5	Nfkb1	Tlr9	Cxcr3	B2m
C	Fcgr4	Cd1d1	Lag3	Mrc1	Oas2	Il1a	Il25	Il17a	Akt1	Cd40lg	Foxp3	Gapdh
D	Ptprc	Ccr7	Cd2	Csf2ra	Eif2ak2	Il1b	Tgfb1	Il7	H2-K1	Fas	Ccr4	Hprt1
E	Ncam1	Cd80	Cd5	Lamp2	Isg15	Tnf	Csf2	Cxcl1	Hif1a	Cd4	Ccr5	Rplp0
F	Klrk1	Cd83	Cd7	Itgam	Isg20	Il12a	Ifng	Ccl3	H2-D1	Cd28	Ctla4	NTC
G	Itga2	Cd209a	Cd14	Fcgr1	Irf3	Il12b	Il27	Ccl4	Tlr3	Ccr2	Il2ra	GDC
H	Klrd1	Pdcd1	Cd68	Itgal	Irf7	Ifna1	Il10	Gzmb	Tlr7	Cxcr4	Il6	PPC

Table 1. Layout of Mouse Immune qPCR Panel Kit
The panel is involved 88 target genes (A1 through H11), 5 reference genes (A12-E12), and 3 control primers (F12-H12).

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: Mouse Immune 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 of 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) Non Template Control (NTC)
- NTC is a negative control for checking on random or reagent contamination.
- Just add the pre-mixture containing nuclease-free water but excluding the template into NTC well.
- If the value of Ct^{NTC} is less than 35, there is overall DNA contamination in your PCR system. In this case, clean up the equipment and replace all the reagents to new ones.

2) Genomic DNA Control (GDC)
- GDC primer is for the detection of non-transcribed genomic DNA contamination.
- In GDC well, primers which target genomic DNA are coated.
- 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 primers, 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>
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