

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Innate & Adaptive Immune Responses

Cat. no. 330231 PAMM-052ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm® BioMark™



## Description

The Mouse Innate & Adaptive Immune Responses RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes involved in the host response to bacterial infection and sepsis. This array includes genes related to the IL-1R and Toll-like Receptor (TLR) Signaling Pathways including IL-1R and TLR genes involved in the detection of pathogens. Genes related to the host defense to bacteria are represented on this array including genes involved in the detection of bacteria, and genes involved in the acute-phase response, complement activation, the inflammatory response, and the antibacterial humoral response. Genes involved in the innate immune response and septic shock are also included on this array. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the innate and adaptive immune responses with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at  $-20^{\circ}\text{C}$ .

**Note:** Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

**Note:** Open the package and store the products appropriately immediately on receipt.

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	Apcs	C3	C5ar1	Casp1	Ccl12	Ccl5	Ccr4	Ccr5	Ccr6	Ccr8	Cd14	Cd4
<b>B</b>	Cd40	Cd40lg	Cd80	Cd86	Cd8a	Crp	Csf2	Cxcl10	Cxcr3	Ddx58	Fasf	Foxp3
<b>C</b>	Gata3	H2-Q10	H2-T23	Icam1	Ifna2	Ifnar1	Ifnb1	Ifng	Ifngr1	Il10	Il13	Il17a
<b>D</b>	Il18	Il1a	Il1b	Il1r1	Il2	Il23a	Il4	Il5	Il6	Ilrk1	Ilr3	Ilr7
<b>E</b>	Ilgam	Jak2	Ly96	Lyz2	Mapk1	Mapk8	Mbl2	Mpo	Mx1	Myd88	Nfkb1	Nfkbia
<b>F</b>	Nlrp3	Nod1	Nod2	Rag1	Rorc	Slc11a1	Stat1	Stat3	Stat4	Stat6	Tbx21	Ticam1
<b>G</b>	Tlr1	Tlr2	Tlr3	Tlr4	Tlr5	Tlr6	Tlr7	Tlr8	Tlr9	Trif	Traf6	Tyk2
<b>H</b>	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.330510	NM_011318	Apcs	Serum amyloid P-component
A02	Mm.19131	NM_009778	C3	Complement component 3
A03	Mm.247623	NM_007577	C5ar1	Complement component 5a receptor 1
A04	Mm.1051	NM_009807	Casp1	Caspase 1
A05	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A06	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
A07	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
A08	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
A09	Mm.8007	NM_009835	Ccr6	Chemokine (C-C motif) receptor 6
A10	Mm.442098	NM_007720	Ccr8	Chemokine (C-C motif) receptor 8
A11	Mm.3460	NM_009841	Cd14	CD14 antigen
A12	Mm.2209	NM_013488	Cd4	CD4 antigen
B01	Mm.271833	NM_011611	Cd40	CD40 antigen
B02	Mm.4861	NM_011616	Cd40lg	CD40 ligand
B03	Mm.89474	NM_009855	Cd80	CD80 antigen
B04	Mm.1452	NM_019388	Cd86	CD86 antigen
B05	Mm.1858	NM_001081110	Cd8a	CD8 antigen, alpha chain
B06	Mm.28767	NM_007768	Crp	C-reactive protein, pentraxin-related
B07	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B08	Mm.877	NM_021274	Cxcl10	Chemokine (C-X-C motif) ligand 10
B09	Mm.12876	NM_009910	Cxcr3	Chemokine (C-X-C motif) receptor 3
B10	Mm.86382	NM_172689	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
B11	Mm.3355	NM_010177	Fasf	Fas ligand (TNF superfamily, member 6)
B12	Mm.182291	NM_054039	Foxp3	Forkhead box P3
C01	Mm.313866	NM_008091	Gata3	GATA binding protein 3
C02	Mm.88795	NM_010391	H2-Q10	Histocompatibility 2, Q region locus 10
C03	Mm.439648	NM_010398	H2-T23	Histocompatibility 2, T region locus 23
C04	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
C05	Mm.14091	NM_010503	Ifna2	Interferon alpha 2
C06	Mm.502	NM_010508	Ifnar1	Interferon (alpha and beta) receptor 1
C07	Mm.1245	NM_010510	Ifnb1	Interferon beta 1, fibroblast
C08	Mm.240327	NM_008337	Ifng	Interferon gamma
C09	Mm.549	NM_010511	Ifngr1	Interferon gamma receptor 1
C10	Mm.874	NM_010548	Il10	Interleukin 10
C11	Mm.1284	NM_008355	Il13	Interleukin 13
C12	Mm.5419	NM_010552	Il17a	Interleukin 17A
D01	Mm.1410	NM_008360	Il18	Interleukin 18
D02	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
D03	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
D04	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type 1
D05	Mm.14190	NM_008366	Il2	Interleukin 2
D06	Mm.125482	NM_031252	Il23a	Interleukin 23, alpha subunit p19
D07	Mm.276360	NM_021283	Il4	Interleukin 4
D08	Mm.4461	NM_010558	Il5	Interleukin 5
D09	Mm.1019	NM_031168	Il6	Interleukin 6

Position	UniGene	GenBank	Symbol	Description
D10	Mm.38241	NM_008363	Irak1	Interleukin-1 receptor-associated kinase 1
D11	Mm.3960	NM_016849	Irf3	Interferon regulatory factor 3
D12	Mm.3233	NM_016850	Irf7	Interferon regulatory factor 7
E01	Mm.262106	NM_008401	Ilgam	Integrin alpha M
E02	Mm.275839	NM_008413	Jak2	Janus kinase 2
E03	Mm.116844	NM_016923	Ly96	Lymphocyte antigen 96
E04	Mm.45436	NM_017372	Lyz2	Lysozyme 2
E05	Mm.196581	NM_011949	Mapk1	Mitogen-activated protein kinase 1
E06	Mm.21495	NM_016700	Mapk8	Mitogen-activated protein kinase 8
E07	Mm.30045	NM_010776	Mbl2	Mannose-binding lectin (protein C) 2
E08	Mm.4668	NM_010824	Mpo	Myeloperoxidase
E09	Mm.33996	NM_010846	Mx1	Myxovirus (influenza virus) resistance 1
E10	Mm.213003	NM_010851	Myd88	Myeloid differentiation primary response gene 88
E11	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
E12	Mm.170515	NM_010907	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F01	Mm.54174	NM_145827	Nlrp3	NLR family, pyrin domain containing 3
F02	Mm.28498	NM_172729	Nod1	Nucleotide-binding oligomerization domain containing 1
F03	Mm.222633	NM_145857	Nod2	Nucleotide-binding oligomerization domain containing 2
F04	Mm.828	NM_009019	Rag1	Recombination activating gene 1
F05	Mm.4372	NM_011281	Rorc	RAR-related orphan receptor gamma
F06	Mm.2913	NM_013612	Slc11a1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
F07	Mm.277406	NM_009283	Stat1	Signal transducer and activator of transcription 1
F08	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
F09	Mm.1550	NM_011487	Stat4	Signal transducer and activator of transcription 4
F10	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
F11	Mm.477879	NM_019507	Tbx21	T-box 21
F12	Mm.203952	NM_174989	Ticam1	Toll-like receptor adaptor molecule 1
G01	Mm.273024	NM_030682	Tlr1	Toll-like receptor 1
G02	Mm.87596	NM_011905	Tlr2	Toll-like receptor 2
G03	Mm.33874	NM_126166	Tlr3	Toll-like receptor 3
G04	Mm.38049	NM_021297	Tlr4	Toll-like receptor 4
G05	Mm.116894	NM_016928	Tlr5	Toll-like receptor 5
G06	Mm.42146	NM_011604	Tlr6	Toll-like receptor 6
G07	Mm.23979	NM_133211	Tlr7	Toll-like receptor 7
G08	Mm.196676	NM_133212	Tlr8	Toll-like receptor 8
G09	Mm.44889	NM_031178	Tlr9	Toll-like receptor 9
G10	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G11	Mm.292729	NM_009424	Traf6	Tnf receptor-associated factor 6
G12	Mm.20249	NM_018793	Tyk2	Tyrosine kinase 2
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse Genomic DNA Contamination
H07	N/A	SA_00104	RTC	Reverse Transcription Control
H08	N/A	SA_00104	RTC	Reverse Transcription Control
H09	N/A	SA_00104	RTC	Reverse Transcription Control
H10	N/A	SA_00103	PPC	Positive PCR Control
H11	N/A	SA_00103	PPC	Positive PCR Control
H12	N/A	SA_00103	PPC	Positive PCR Control

## Related products

For optimal performance, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT <sup>2</sup> SYBR Green ROX™ qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT <sup>2</sup> SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

\* Larger kit sizes available; please inquire.

RT<sup>2</sup> Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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