

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Rat Innate & Adaptive Immune Responses

Cat. no. 330231 PARN-052ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² 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 ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Rat Innate & Adaptive Immune Responses RT² 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 *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² 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. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at –20°C.

Note: Ensure that you have the correct RT² Profiler PCR Array format for your real-time cycler (see table above).

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

Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Apcs	C3	C5ar1	Camp	Casp1	Casp8	Ccl12	Ccl3	Ccl5	Ccr4	Ccr5	Ccr6
B	Ccr8	Cd14	Cd1d1	Cd4	Cd40	Cd40lg	Cd80	Cd86	Cd8a	Crp	Csf2	Cxcl10
C	Cxcr3	Ddx58	Faslg	Foxp3	Gata3	Icam1	Ifna1	Ifnar1	Ifnb1	Ifng	Ifngr1	Il10
D	Il13	Il18	Il1a	Il1b	Il1r1	Il2	Il23a	Il4	Il5	Il6	Ilrk1	Ilrf3
E	Irf7	Ilgam	Jak2	Jun	Lbp	Lyz2	Mapk1	Mapk14	Mapk3	Mapk8	Mbl2	Mpo
F	Mx2	Myd88	Nfkb1	Nfkbia	Nlrp3	Nod2	Rag1	Rorc	Slc11a1	Stat1	Stat3	Stat4
G	Stat6	Tbx21	Tlr1	Tlr2	Tlr3	Tlr4	Tlr5	Tlr6	Tlr7	Tlr9	Tnf	Traf6
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.109007	NM_017170	Apcs	Amyloid P component, serum
A02	Rn.11378	NM_016994	C3	Complement component 3
A03	Rn.10680	NM_053619	C5ar1	Complement component 5a receptor 1
A04	Rn.33146	NM_001100724	Camp	Cathelicidin antimicrobial peptide
A05	Rn.37508	NM_012762	Casp1	Caspase 1
A06	Rn.54474	NM_022277	Casp8	Caspase 8
A07	Rn.137780	NM_001105822	Ccl12	Chemokine (C-C motif) ligand 12
A08	Rn.10139	NM_013025	Ccl3	Chemokine (C-C motif) ligand 3
A09	Rn.8019	NM_031116	Ccl5	Chemokine (C-C motif) ligand 5
A10	Rn.81076	NM_133532	Ccr4	Chemokine (C-C motif) receptor 4
A11	Rn.10736	NM_053960	Ccr5	Chemokine (C-C motif) receptor 5
A12	Rn.161767	NM_001013145	Ccr6	Chemokine (C-C motif) receptor 6
B01	N/A	XM_236704	Ccr8	Chemokine (C-C motif) receptor 8
B02	Rn.42942	NM_021744	Cd14	CD14 molecule
B03	Rn.11120	NM_017079	Cd1d1	CD1d1 molecule
B04	Rn.10748	NM_012705	Cd4	CD4 molecule
B05	Rn.25180	NM_134360	Cd40	CD40 molecule, TNF receptor superfamily member 5
B06	Rn.44218	NM_053353	Cd40lg	CD40 ligand
B07	Rn.10138	NM_012926	Cd80	CD80 molecule
B08	Rn.6734	NM_020081	Cd86	CD86 molecule
B09	Rn.10306	NM_031538	Cd8a	CD8a molecule
B10	Rn.16463	NM_017096	Crp	C-reactive protein, pentraxin-related
B11	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B12	Rn.10584	NM_139089	Cxcl10	Chemokine (C-X-C motif) ligand 10
C01	Rn.24787	NM_053415	Cxcr3	Chemokine (C-X-C motif) receptor 3
C02	Rn.38642	NM_001106645	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
C03	Rn.9725	NM_012908	Faslg	Fas ligand (TNF superfamily, member 6)
C04	Rn.177272	NM_001108250	Foxp3	Forkhead box P3
C05	Rn.92350	NM_133293	Gata3	GATA binding protein 3
C06	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
C07	Rn.196548	NM_001014786	Ifna1	Interferon-alpha 1
C08	Rn.105738	NM_001105893	Ifnar1	Interferon (alpha, beta and omega) receptor 1
C09	Rn.138105	NM_019127	Ifnb1	Interferon beta 1, fibroblast
C10	Rn.10795	NM_138880	Ifng	Interferon gamma
C11	Rn.19927	NM_053783	Ifngr1	Interferon gamma receptor 1
C12	Rn.9868	NM_012854	Il10	Interleukin 10
D01	Rn.9921	NM_053828	Il13	Interleukin 13
D02	Rn.11118	NM_019165	Il18	Interleukin 18
D03	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
D04	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D05	Rn.9758	NM_013123	Il1r1	Interleukin 1 receptor, type I
D06	Rn.9871	NM_053836	Il2	Interleukin 2
D07	Rn.81073	NM_130410	Il23a	Interleukin 23, alpha subunit p19
D08	Rn.108255	NM_201270	Il4	Interleukin 4
D09	Rn.44227	NM_021834	Il5	Interleukin 5

Position	UniGene	GenBank	Symbol	Description
D10	Rn.9873	NM_012589	Il6	Interleukin 6
D11	Rn.22238	NM_001127555	Irk1	Interleukin-1 receptor-associated kinase 1
D12	Rn.1499	NM_001006969	Irf3	Interferon regulatory factor 3
E01	Rn.101159	NM_001033691	Irf7	Interferon regulatory factor 7
E02	Rn.54465	NM_012711	Iitgam	Integrin, alpha M
E03	Rn.18909	NM_031514	Jak2	Janus kinase 2
E04	Rn.93714	NM_021835	Jun	Jun oncogene
E05	Rn.48863	NM_017208	Lbp	Lipopolysaccharide binding protein
E06	Rn.2283	NM_012771	Lyz2	Lysozyme 2
E07	Rn.34914	NM_053842	Mapk1	Mitogen activated protein kinase 1
E08	Rn.88085	NM_031020	Mapk14	Mitogen activated protein kinase 14
E09	Rn.2592	NM_017347	Mapk3	Mitogen activated protein kinase 3
E10	Rn.4090	XM_341399	Mapk8	Mitogen-activated protein kinase 8
E11	Rn.9667	NM_022704	Mbl2	Mannose-binding lectin (protein C) 2
E12	Rn.47782	NM_001107036	Mpo	Myeloperoxidase
F01	Rn.10374	NM_134350	Mx2	Myxovirus (influenza virus) resistance 2
F02	Rn.37341	NM_198130	Myd88	Myeloid differentiation primary response gene 88
F03	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F04	Rn.12550	NM_001105720	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F05	Rn.214177	XM_220513	Nlrp3	NLR family, pyrin domain containing 3
F06	Rn.218600	NM_001106172	Nod2	Nucleotide-binding oligomerization domain containing 2
F07	Rn.92344	NM_053468	Rag1	Recombination activating gene 1
F08	Rn.21421	XM_347322	Rorc	RAR-related orphan receptor C
F09	Rn.105919	NM_001031658	Slc11a1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
F10	Rn.33229	NM_032612	Stat1	Signal transducer and activator of transcription 1
F11	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
F12	Rn.137580	NM_001012226	Stat4	Signal transducer and activator of transcription 4
G01	Rn.6880	NM_001044250	Stat6	Signal transducer and activator of transcription 6
G02	Rn.144930	NM_001107043	Tbx21	T-box 21
G03	Rn.107212	NM_001172120	Tlr1	Toll-like receptor 1
G04	Rn.46387	NM_198769	Tlr2	Toll-like receptor 2
G05	Rn.15273	NM_198791	Tlr3	Toll-like receptor 3
G06	Rn.14534	NM_019178	Tlr4	Toll-like receptor 4
G07	Rn.198962	NM_001145828	Tlr5	Toll-like receptor 5
G08	Rn.163249	NM_207604	Tlr6	Toll-like receptor 6
G09	Rn.219862	NM_001097582	Tlr7	Toll-like receptor 7
G10	Rn.92495	NM_198131	Tlr9	Toll-like receptor 9
G11	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G12	Rn.220435	NM_001107754	Traf6	Tnf receptor-associated factor 6
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT² SYBR[®] Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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 ² 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 ² 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.

RT² 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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