

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

## Rat Th17 Response

Cat. no. 330231 PARN-073ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems <sup>®</sup> models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad <sup>®</sup> models iCycler <sup>®</sup> , iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf <sup>®</sup> Mastercycler <sup>®</sup> ep realplex models 2, 2s, 4, 4s; Stratagene <sup>®</sup> models Mx3005P <sup>®</sup> , Mx3000P <sup>®</sup> ; 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 <sup>®</sup> , DNA Engine Opticon 2; Stratagene Mx4000 <sup>®</sup>
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 <sup>®</sup> LightCycler <sup>®</sup> 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 <sup>®</sup> BioMark™



Sample & Assay Technologies

## Description

The Rat Th17 Response RT<sup>2</sup> Profiler PCR Array profiles the expression of 84 genes related to the Th17 Regulatory Network. Th17 is a newly defined subset of CD4(+) T cells that is distinct from the traditional Th1, Th2 and Treg. Th17 is highly proinflammatory and induces severe autoimmunity. This array contains surface molecules, cytokines and receptors, chemokines, matrix metalloproteinases, cell signaling molecules and transcriptional factors. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the Th17 regulatory network 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°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>	Ccl1	Ccl2	Ccl20	Ccl22	Ccl7	Ccr2	Ccr4	Ccr6	Cd2	Cd28	Cd34	Cd4
<b>B</b>	Cd40lg	Cd8a	Cebpb	Clec7a	Csf2	Csf3	Cx3cl1	Cxcl1	Cxcl12	Cxcl2	Cxcl5	Foxp3
<b>C</b>	Gata3	Icam1	Icos	Ilfng	Il10	Il12b	Il12rb1	Il12rb2	Il13	Il15	Il17a	Il17b
<b>D</b>	Il17c	Il17f	Il17ra	Il17rb	Il17rc	Il17re	Il18	Il1b	Il1r1	Il2	Il21	Il22
<b>E</b>	Il23a	Il23r	Il25	Il27	Il3	Il4	Il5	Il6	Il6r	Il7r	Il9	Irf4
<b>F</b>	Isg20	Jak1	Jak2	Mmp3	Mmp9	Myd88	Nfatc2	NfkB1	Rora	Rorc	Runx1	S1pr1
<b>G</b>	Socs1	Socs3	Stat3	Stat4	Stat5a	Stat6	Syk	Tbx21	Tgfb1	Tlr4	Tnf	Traf6
<b>H</b>	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

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

Position	UniGene	GenBank	Symbol	Description
A01	Rn.157282	XM_001067590	Ccl1	Chemokine (C-C motif) ligand 1
A02	Rn.4772	NM_031530	Ccl2	Chemokine (C-C motif) ligand 2
A03	Rn.10722	NM_019233	Ccl20	Chemokine (C-C motif) ligand 20
A04	Rn.48727	NM_057203	Ccl22	Chemokine (C-C motif) ligand 22
A05	Rn.26815	NM_001007612	Ccl7	Chemokine (C-C motif) ligand 7
A06	Rn.211983	NM_021866	Ccr2	Chemokine (C-C motif) receptor 2
A07	Rn.81076	NM_133532	Ccr4	Chemokine (C-C motif) receptor 4
A08	Rn.161767	NM_001013145	Ccr6	Chemokine (C-C motif) receptor 6
A09	Rn.10328	NM_012830	Cd2	Cd2 molecule
A10	Rn.10327	NM_013121	Cd28	Cd28 molecule
A11	Rn.219720	NM_001107202	Cd34	CD34 molecule
A12	Rn.10748	NM_012705	Cd4	Cd4 molecule
B01	Rn.44218	NM_053353	Cd40lg	CD40 ligand
B02	Rn.10306	NM_031538	Cd8a	CD8a molecule
B03	Rn.6479	NM_024125	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
B04	Rn.15743	XM_001067977	Clec7a	C-type lectin domain family 7, member a
B05	Rn.44285	XM_340799	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B06	Rn.53973	NM_017104	Csf3	Colony stimulating factor 3 (granulocyte)
B07	Rn.107266	NM_134455	Cx3cl1	Chemokine (C-X3-C motif) ligand 1
B08	Rn.10907	NM_030845	Cxcl1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
B09	Rn.54439	NM_022177	Cxcl12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
B10	Rn.10230	NM_053647	Cxcl2	Chemokine (C-X-C motif) ligand 2
B11	Rn.44449	NM_022214	Cxcl5	Chemokine (C-X-C motif) ligand 5
B12	Rn.177272	NM_001108250	Foxp3	Forkhead box P3
C01	Rn.92350	NM_133293	Gata3	GATA binding protein 3
C02	Rn.12	NM_012967	Icam1	Intercellular adhesion molecule 1
C03	Rn.168816	NM_022610	Icos	Inducible T-cell co-stimulator
C04	Rn.10795	NM_138880	Ilfng	Interferon gamma
C05	Rn.9868	NM_012854	Il10	Interleukin 10
C06	Rn.48686	NM_022611	Il12b	Interleukin 12b
C07	Rn.162266	XM_344493	Il12rb1	Interleukin 12 receptor, beta 1
C08	Rn.207395	XM_231873	Il12rb2	Interleukin 12 receptor, beta 2
C09	Rn.9921	NM_053828	Il13	Interleukin 13
C10	Rn.2490	NM_013129	Il15	Interleukin 15
C11	Rn.218513	NM_001106897	Il17a	Interleukin 17A
C12	Rn.50003	NM_053789	Il17b	Interleukin 17B
D01	N/A	XM_001078615	Il17c	Interleukin 17C
D02	Rn.34022	NM_001015011	Il17f	Interleukin 17F
D03	Rn.106209	NM_001107883	Il17ra	Interleukin 17 receptor A
D04	Rn.150863	NM_001107290	Il17rb	Interleukin 17 receptor B
D05	Rn.139872	XM_216240	Il17rc	Interleukin 17 receptor C
D06	Rn.129068	NM_001004091	Il17re	Interleukin 17 receptor E
D07	Rn.11118	NM_019165	Il18	Interleukin 18
D08	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D09	Rn.9758	NM_013123	Il1r1	Interleukin 1 receptor, type I

Position	UniGene	GenBank	Symbol	Description
D10	Rn.9871	NM_053836	Il2	Interleukin 2
D11	Rn.214949	NM_001108943	Il21	Interleukin 21
D12	Rn.195879	XM_576228	Il22	Interleukin 22
E01	Rn.81073	NM_130410	Il23a	Interleukin 23, alpha subunit p19
E02	Rn.134349	XM_001072576	Il23r	Interleukin 23 receptor
E03	Rn.141273	XM_577423	Il25	Interleukin 25
E04	N/A	XM_344962	Il27	Interleukin 27
E05	Rn.10652	NM_031513	Il3	Interleukin 3
E06	Rn.108255	NM_201270	Il4	Interleukin 4
E07	Rn.44227	NM_021834	Il5	Interleukin 5
E08	Rn.9873	NM_012589	Il6	Interleukin 6
E09	Rn.1716	NM_017020	Il6r	Interleukin 6 receptor
E10	Rn.6633	NM_001106418	Il7r	Interleukin 7 receptor
E11	Rn.92374	NM_001105747	Il9	Interleukin 9
E12	Rn.82114	NM_001106108	Irf4	Interferon regulatory factor 4
F01	Rn.16103	NM_001008510	Isg20	Interferon stimulated exonuclease gene 20
F02	Rn.90191	NM_053466	Jak1	Janus kinase 1
F03	Rn.18909	NM_031514	Jak2	Janus kinase 2
F04	Rn.32086	NM_133523	Mmp3	Matrix metalloproteinase 3
F05	Rn.10209	NM_031055	Mmp9	Matrix metalloproteinase 9
F06	Rn.37341	NM_198130	Myd88	Myeloid differentiation primary response gene 88
F07	Rn.214090	NM_001107805	Nfatc2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
F08	Rn.2411	XM_342346	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F09	Rn.43530	NM_001106834	Rora	RAR-related orphan receptor A
F10	Rn.21421	XM_347322	Rorc	RAR-related orphan receptor C
F11	Rn.11201	NM_017325	Runx1	Runt-related transcription factor 1
F12	Rn.109455	NM_017301	S1pr1	Sphingosine-1-phosphate receptor 1
G01	Rn.82754	NM_145879	Socs1	Suppressor of cytokine signaling 1
G02	Rn.127801	NM_053565	Socs3	Suppressor of cytokine signaling 3
G03	Rn.10247	NM_012747	Stat3	Signal transducer and activator of transcription 3
G04	Rn.137580	NM_001012226	Stat4	Signal transducer and activator of transcription 4
G05	Rn.154399	NM_017064	Stat5a	Signal transducer and activator of transcription 5A
G06	Rn.6880	NM_001044250	Stat6	Signal transducer and activator of transcription 6
G07	Rn.87407	NM_012758	Syk	Spleen tyrosine kinase
G08	Rn.144930	NM_001107043	Tbx21	T-box 21
G09	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G10	Rn.14534	NM_019178	Tlr4	Toll-like receptor 4
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, 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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