

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

Mouse Inflammatory Cytokines & Receptors

Cat. no. 330231 PAMM-011ZA

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 Mouse Inflammatory Cytokines & Receptors RT² Profiler PCR Array profiles the expression of 84 key genes mediating the inflammatory response. Acute inflammation occurs in response to cell damage due to infection or injury. During this process, cellular and plasma derived factors encourage extravasation, the recruitment of circulating immune cells into the affected tissue. These immune cells in turn up-regulate the expression of inflammatory cytokines that recruit additional immune cells to mount an immune response to any invading organisms and to further promote and eventually resolve the inflammatory response. Chronic inflammation, or expression of these cytokines and receptors at low levels over long periods of time, promotes various pathological conditions including allergies and asthma, cardiovascular system disorders (atherosclerosis), central nervous system disorders (Alzheimer's disease), fibrosis, and rheumatoid arthritis. This array contains genes involved in mediating immune cascade reactions during inflammation. The chemokines, cytokines, and interleukins involved in the inflammatory response are represented as well as their receptors. Profiling the expression of these inflammatory cytokine and receptor genes helps determine the state of and the mechanisms behind inflammation in your experimental model system. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to inflammation 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	Aimp1	Bmp2	Ccl1	Ccl11	Ccl12	Ccl17	Ccl19	Ccl2	Ccl20	Ccl22	Ccl24	Ccl3
B	Ccl4	Ccl5	Ccl6	Ccl7	Ccl8	Ccl9	Ccr1	Ccr10	Ccr2	Ccr3	Ccr4	Ccr5
C	Ccr6	Ccr8	Cd40lg	Csf1	Csf2	Csf3	Cx3cl1	Cxcl1	Cxcl10	Cxcl11	Cxcl12	Cxcl13
D	Cxcl15	Cxcl5	Cxcl9	Cxcr2	Cxcr3	Cxcr5	Fasl	Ifng	Il10ra	Il10rb	Il11	Il13
E	Il15	Il16	Il17a	Il17b	Il17f	Il1a	Il1b	Il1r1	Il1rn	Il21	Il27	Il2rb
F	Il2rg	Il3	Il33	Il4	Il5	Il5ra	Il6ra	Il6st	Il7	Ita	Ltb	Mif
G	Nampt	Osm	Pf4	Spp1	Tnf	Tnfrsf11b	Tnfrsf10	Tnfrsf11	Tnfrsf13	Tnfrsf13b	Tnfrsf4	Vegfa
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.235137	NM_007926	Aimp1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A02	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
A03	Mm.1283	NM_011329	Ccl1	Chemokine (C-C motif) ligand 1
A04	Mm.4686	NM_011330	Ccl11	Chemokine (C-C motif) ligand 11
A05	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A06	Mm.41988	NM_011332	Ccl17	Chemokine (C-C motif) ligand 17
A07	Mm.424740	NM_011888	Ccl19	Chemokine (C-C motif) ligand 19
A08	Mm.290320	NM_011333	Ccl2	Chemokine (C-C motif) ligand 2
A09	Mm.116739	NM_016960	Ccl20	Chemokine (C-C motif) ligand 20
A10	Mm.12895	NM_009137	Ccl22	Chemokine (C-C motif) ligand 22
A11	Mm.31505	NM_019577	Ccl24	Chemokine (C-C motif) ligand 24
A12	Mm.1282	NM_011337	Ccl3	Chemokine (C-C motif) ligand 3
B01	Mm.244263	NM_013652	Ccl4	Chemokine (C-C motif) ligand 4
B02	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B03	Mm.137	NM_009139	Ccl6	Chemokine (C-C motif) ligand 6
B04	Mm.341574	NM_013654	Ccl7	Chemokine (C-C motif) ligand 7
B05	Mm.42029	NM_021443	Ccl8	Chemokine (C-C motif) ligand 8
B06	Mm.416125	NM_011338	Ccl9	Chemokine (C-C motif) ligand 9
B07	Mm.274927	NM_009912	Ccr1	Chemokine (C-C motif) receptor 1
B08	Mm.8021	NM_007721	Ccr10	Chemokine (C-C motif) receptor 10
B09	Mm.6272	NM_009915	Ccr2	Chemokine (C-C motif) receptor 2
B10	Mm.57050	NM_009914	Ccr3	Chemokine (C-C motif) receptor 3
B11	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
B12	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
C01	Mm.8007	NM_009835	Ccr6	Chemokine (C-C motif) receptor 6
C02	Mm.442098	NM_007720	Ccr8	Chemokine (C-C motif) receptor 8
C03	Mm.4861	NM_011616	Cd40lg	CD40 ligand
C04	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
C05	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
C06	Mm.1238	NM_009971	Csf3	Colony stimulating factor 3 (granulocyte)
C07	Mm.103711	NM_009142	Cx3cl1	Chemokine (C-X3-C motif) ligand 1
C08	Mm.21013	NM_008176	Cxcl1	Chemokine (C-X-C motif) ligand 1
C09	Mm.877	NM_021274	Cxcl10	Chemokine (C-X-C motif) ligand 10
C10	Mm.131723	NM_019494	Cxcl11	Chemokine (C-X-C motif) ligand 11
C11	Mm.303231	NM_021704	Cxcl12	Chemokine (C-X-C motif) ligand 12
C12	Mm.10116	NM_018866	Cxcl13	Chemokine (C-X-C motif) ligand 13
D01	Mm.64326	NM_011339	Cxcl15	Chemokine (C-X-C motif) ligand 15
D02	Mm.4660	NM_009141	Cxcl5	Chemokine (C-X-C motif) ligand 5
D03	Mm.766	NM_008599	Cxcl9	Chemokine (C-X-C motif) ligand 9
D04	Mm.234466	NM_009909	Cxcr2	Chemokine (C-X-C motif) receptor 2
D05	Mm.12876	NM_009910	Cxcr3	Chemokine (C-X-C motif) receptor 3
D06	Mm.6246	NM_007551	Cxcr5	Chemokine (C-X-C motif) receptor 5
D07	Mm.3355	NM_010177	FasL	Fas ligand (TNF superfamily, member 6)
D08	Mm.240327	NM_008337	Ifng	Interferon gamma
D09	Mm.379327	NM_008348	Il10ra	Interleukin 10 receptor, alpha

Position	UniGene	GenBank	Symbol	Description
D10	Mm.4154	NM_008349	Il10rb	Interleukin 10 receptor, beta
D11	Mm.35814	NM_008350	Il11	Interleukin 11
D12	Mm.1284	NM_008355	Il13	Interleukin 13
E01	Mm.4392	NM_008357	Il15	Interleukin 15
E02	Mm.10137	NM_010551	Il16	Interleukin 16
E03	Mm.5419	NM_010552	Il17a	Interleukin 17A
E04	Mm.59313	NM_019508	Il17b	Interleukin 17B
E05	Mm.222807	NM_145856	Il17f	Interleukin 17F
E06	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
E07	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
E08	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type I
E09	Mm.882	NM_031167	Il1rn	Interleukin 1 receptor antagonist
E10	Mm.157689	NM_021782	Il21	Interleukin 21
E11	Mm.222632	NM_145636	Il27	Interleukin 27
E12	Mm.35287	NM_008368	Il2rb	Interleukin 2 receptor, beta chain
F01	Mm.2923	NM_013563	Il2rg	Interleukin 2 receptor, gamma chain
F02	Mm.983	NM_010556	Il3	Interleukin 3
F03	Mm.182359	NM_133775	Il33	Interleukin 33
F04	Mm.276360	NM_021283	Il4	Interleukin 4
F05	Mm.4461	NM_010558	Il5	Interleukin 5
F06	Mm.3448	NM_008370	Il5ra	Interleukin 5 receptor, alpha
F07	Mm.2856	NM_010559	Il6ra	Interleukin 6 receptor, alpha
F08	Mm.4364	NM_010560	Il6st	Interleukin 6 signal transducer
F09	Mm.3825	NM_008371	Il7	Interleukin 7
F10	Mm.87787	NM_010735	Lta	Lymphotoxin A
F11	Mm.1715	NM_008518	Ltb	Lymphotoxin B
F12	Mm.2326	NM_010798	Mif	Macrophage migration inhibitory factor
G01	Mm.202727	NM_021524	Nampt	Nicotinamide phosphoribosyltransferase
G02	Mm.131422	NM_001013365	Osm	Oncostatin M
G03	Mm.332490	NM_019932	Pf4	Platelet factor 4
G04	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
G05	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G06	Mm.15383	NM_008764	Tnfrsf11b	Tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)
G07	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G08	Mm.249221	NM_011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Mm.8983	NM_023517	Tnfsf13	Tumor necrosis factor (ligand) superfamily, member 13
G10	Mm.28835	NM_033622	Tnfsf13b	Tumor necrosis factor (ligand) superfamily, member 13b
G11	Mm.4994	NM_009452	Tnfsf4	Tumor necrosis factor (ligand) superfamily, member 4
G12	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
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, 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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