

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

Human Inflammatory Cytokines & Receptors

Cat. no. 330231 PAHS-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 Human 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	C5	CCL1	CCL11	CCL13	CCL15	CCL16	CCL17	CCL2	CCL20	CCL22
B	CCL23	CCL24	CCL26	CCL3	CCL4	CCL5	CCL7	CCL8	CCR1	CCR2	CCR3	CCR4
C	CCR5	CCR6	CCR8	CD40LG	CSF1	CSF2	CSF3	CX3CL1	CX3CR1	CXCL1	CXCL10	CXCL11
D	CXCL12	CXCL13	CXCL2	CXCL3	CXCL5	CXCL6	CXCL9	CXCR1	CXCR2	FASLG	IFNA2	IFNG
E	IL10RA	IL10RB	IL13	IL15	IL16	IL17A	IL17C	IL17F	IL1A	IL1B	IL1R1	IL1RN
F	IL21	IL27	IL3	IL33	IL5	IL5RA	IL7	IL8	IL9	IL9R	LTA	LTB
G	MIF	NAMPT	OSM	SPP1	TNF	TNFRSF11B	TNFSF10	TNFSF11	TNFSF13	TNFSF13B	TNFSF4	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.591680	NM_004757	AIMP1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A02	Hs.73853	NM_001200	BMP2	Bone morphogenetic protein 2
A03	Hs.494997	NM_001735	C5	Complement component 5
A04	Hs.72918	NM_002981	CCL1	Chemokine (C-C motif) ligand 1
A05	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
A06	Hs.414629	NM_005408	CCL13	Chemokine (C-C motif) ligand 13
A07	Hs.272493	NM_032965	CCL15	Chemokine (C-C motif) ligand 15
A08	Hs.10458	NM_004590	CCL16	Chemokine (C-C motif) ligand 16
A09	Hs.546294	NM_002987	CCL17	Chemokine (C-C motif) ligand 17
A10	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A11	Hs.75498	NM_004591	CCL20	Chemokine (C-C motif) ligand 20
A12	Hs.534347	NM_002990	CCL22	Chemokine (C-C motif) ligand 22
B01	Hs.169191	NM_005064	CCL23	Chemokine (C-C motif) ligand 23
B02	Hs.247838	NM_002991	CCL24	Chemokine (C-C motif) ligand 24
B03	Hs.131342	NM_006072	CCL26	Chemokine (C-C motif) ligand 26
B04	Hs.514107	NM_002983	CCL3	Chemokine (C-C motif) ligand 3
B05	Hs.75703	NM_002984	CCL4	Chemokine (C-C motif) ligand 4
B06	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B07	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
B08	Hs.271387	NM_005623	CCL8	Chemokine (C-C motif) ligand 8
B09	Hs.301921	NM_001295	CCR1	Chemokine (C-C motif) receptor 1
B10	Hs.511794	NM_001123396	CCR2	Chemokine (C-C motif) receptor 2
B11	Hs.506190	NM_001837	CCR3	Chemokine (C-C motif) receptor 3
B12	Hs.184926	NM_005508	CCR4	Chemokine (C-C motif) receptor 4
C01	Hs.450802	NM_000579	CCR5	Chemokine (C-C motif) receptor 5
C02	Hs.46468	NM_004367	CCR6	Chemokine (C-C motif) receptor 6
C03	Hs.113222	NM_005201	CCR8	Chemokine (C-C motif) receptor 8
C04	Hs.592244	NM_000074	CD40LG	CD40 ligand
C05	Hs.591402	NM_000757	CSF1	Colony stimulating factor 1 (macrophage)
C06	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
C07	Hs.2233	NM_000759	CSF3	Colony stimulating factor 3 (granulocyte)
C08	Hs.531668	NM_002996	CX3CL1	Chemokine (C-X3-C motif) ligand 1
C09	Hs.78913	NM_001337	CX3CR1	Chemokine (C-X3-C motif) receptor 1
C10	Hs.789	NM_001511	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
C11	Hs.632586	NM_001565	CXCL10	Chemokine (C-X-C motif) ligand 10
C12	Hs.632592	NM_005409	CXCL11	Chemokine (C-X-C motif) ligand 11
D01	Hs.522891	NM_000609	CXCL12	Chemokine (C-X-C motif) ligand 12
D02	Hs.100431	NM_006419	CXCL13	Chemokine (C-X-C motif) ligand 13
D03	Hs.590921	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
D04	Hs.89690	NM_002090	CXCL3	Chemokine (C-X-C motif) ligand 3
D05	Hs.89714	NM_002994	CXCL5	Chemokine (C-X-C motif) ligand 5
D06	Hs.164021	NM_002993	CXCL6	Chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)
D07	Hs.77367	NM_002416	CXCL9	Chemokine (C-X-C motif) ligand 9
D08	Hs.194778	NM_000634	CXCR1	Chemokine (C-X-C motif) receptor 1
D09	Hs.846	NM_001557	CXCR2	Chemokine (C-X-C motif) receptor 2

Position	UniGene	GenBank	Symbol	Description
D10	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
D11	Hs.211575	NM_000605	IFNA2	Interferon, alpha 2
D12	Hs.856	NM_000619	IFNG	Interferon, gamma
E01	Hs.504035	NM_001558	IL10RA	Interleukin 10 receptor, alpha
E02	Hs.654593	NM_000628	IL10RB	Interleukin 10 receptor, beta
E03	Hs.845	NM_002188	IL13	Interleukin 13
E04	Hs.654378	NM_000585	IL15	Interleukin 15
E05	Hs.459095	NM_004513	IL16	Interleukin 16
E06	Hs.41724	NM_002190	IL17A	Interleukin 17A
E07	Hs.278911	NM_013278	IL17C	Interleukin 17C
E08	Hs.272295	NM_052872	IL17F	Interleukin 17F
E09	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
E10	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
E11	Hs.701982	NM_000877	IL1R1	Interleukin 1 receptor, type I
E12	Hs.81134	NM_000577	IL1RN	Interleukin 1 receptor antagonist
F01	Hs.567559	NM_021803	IL21	Interleukin 21
F02	Hs.528111	NM_145659	IL27	Interleukin 27
F03	Hs.694	NM_000588	IL3	Interleukin 3 (colony-stimulating factor, multiple)
F04	Hs.348390	NM_033439	IL33	Interleukin 33
F05	Hs.2247	NM_000879	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
F06	Hs.68876	NM_000564	IL5RA	Interleukin 5 receptor, alpha
F07	Hs.591873	NM_000880	IL7	Interleukin 7
F08	Hs.624	NM_000584	IL8	Interleukin 8
F09	Hs.960	NM_000590	IL9	Interleukin 9
F10	Hs.406228	NM_002186	IL9R	Interleukin 9 receptor
F11	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
F12	Hs.376208	NM_002341	LTB	Lymphotoxin beta (TNF superfamily, member 3)
G01	Hs.407995	NM_002415	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
G02	Hs.489615	NM_005746	NAMPT	Nicotinamide phosphoribosyltransferase
G03	Hs.248156	NM_020530	OSM	Oncostatin M
G04	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1
G05	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G06	Hs.81791	NM_002546	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
G07	Hs.478275	NM_003810	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G08	Hs.333791	NM_003701	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Hs.54673	NM_003808	TNFSF13	Tumor necrosis factor (ligand) superfamily, member 13
G10	Hs.525157	NM_006573	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
G11	Hs.181097	NM_003326	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G12	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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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