

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

Pig Cytokines & Chemokines

Cat. no. 330231 PASS-150ZA

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 Pig Cytokines & Chemokines RT² Profiler PCR Array profiles the expression of 84 key secreted proteins central to the immune response and other functions. Cytokines, small signaling proteins secreted primarily by immune cells, activate inter- and intracellular signaling during immune responses. Historically, cytokines were functionally separated into 2 families: lymphokines/interleukins and chemokines. All cytokines released by immune cells were called lymphokines/interleukins, whereas chemotactic cytokines were called chemokines. However, these family descriptions are no longer accurate because some growth factors and hormones also exhibit cellular effects very similar to cytokine family members. In addition to immune cells, many different cell types express cytokines to stimulate immune response, inflammation, and other processes. The ultimate effect of a cytokine release depends on the activated cell type expressing the specific cytokine receptor. This array includes both families of common cytokines as well as growth factors and hormones with cytokine-like properties. The results of this array should augment understanding of immune response in a variety of cell types. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of key cytokines and chemokines 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	ADIPOQ	AMCF-II	BMP2	BMP3	BMP4	BMP6	Bmp7	C5	CCL1	CCL11	CCL17	CCL19
B	CCL2	CCL20	CCL21	CCL22	CCL25	CCL27	CCL28	CCL3L1	CCL4	CCL5	CCL8	CD40LG
C	CSF1	CSF2	CSF3	CXCL10	CXCL11	CXCL12	LOC396594	CXCL9	FASLG	IFN-ALPHA-4	IFN-ALPHA-5	IFNB1
D	IFNG	IL10	IL12A	IL12B	IL13	IL15	IL16	IL17A	IL17F	IL18	IL1A	IL1B
E	IL2	IL21	IL22	IL23A	IL27	IL4	IL5	IL6	IL7	CXCL8	IL9	INHBA
F	INHBA	LIF	OSM	LOC1005158 57	CCL23	CCL16	CNTF	CXCL13	THPO	LOC1006216 82	TNFSF9	CCL24
G	LTA	LTB	MIF	MSTN	SPP1	TGFB1	TGFB2	TNF	TNFSF10	TNFSF13B	TNFSF4	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPL13A	SGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	Ssc.18549	NM_214370	ADIPOQ	Adiponectin, C1Q and collagen domain containing	PPS00960B
A02	Ssc.719	NM_213876	AMCF-II	Alveolar macrophage-derived chemotactic factor-II	PPS00250A
A03	Ssc.4190	NM_001195399	BMP2	Bone morphogenetic protein 2	PPS03938A
A04	Ssc.33398	NM_001206388	BMP3	Bone morphogenetic protein 3	PPS05180A
A05	Ssc.16690	NM_001101031	BMP4	Bone morphogenetic protein 4	PPS01776A
A06	Ssc.66765	NM_001168001	BMP6	Bone morphogenetic protein 6	PPS03428A
A07	Ssc.21774	NM_001105290	Bmp7	Bone morphogenetic protein 7	PPS01260A
A08	Ssc.21108	NM_001001646	C5	Complement component 5	PPS01144A
A09	Ssc.78517	NM_001166491	CCL1	Chemokine (C-C motif) ligand 1	PPS04643A
A10	Ssc.42710	NM_001256774	CCL11	CCL11	PPS07989A
A11	Ssc.42664	NM_001256147	CCL17	Chemokine ligand 17-like protein	PPS07955A
A12	Ssc.21802	NM_001170516	CCL19	Chemokine (C-C motif) ligand 19	PPS01284A
B01	Ssc.657	NM_214214	CCL2	Chemokine (C-C motif) ligand 2	PPS00734A
B02	Ssc.42745	NM_001024589	CCL20	Chemokine (C-C motif) ligand 20	PPS01329A
B03	Ssc.18613	NM_001005151	CCL21	Chemokine (C-C motif) ligand 21	PPS01218A
B04	Ssc.48467	NM_001256776	CCL22	C-C motif chemokine 22-like	PPS11605A
B05	Ssc.97249	NM_001025214	CCL25	Chemokine (C-C motif) ligand 25	PPS01219A
B06	Ssc.381	NM_001003922	CCL27	Chemokine (C-C motif) ligand 27	PPS01181A
B07	Ssc.42744	NM_001024695	CCL28	Chemokine (C-C motif) ligand 28	PPS01330A
B08	Ssc.43937	NM_001009579	CCL3L1	Chemokine (C-C motif) ligand 3-like 1	PPS01280A
B09	Ssc.23797	NM_213779	CCL4	Chemokine (C-C motif) ligand 4	PPS00092A
B10	Ssc.22030	NM_001129946	CCL5	Chemokine (C-C motif) ligand 5	PPS00051A
B11	Ssc.9957	NM_001164515	CCL8	Chemokine (C-C motif) ligand 8	PPS04615A
B12	Ssc.15861	NM_214126	CD40LG	CD40 ligand	PPS00564A
C01	Ssc.19697	NM_001244523	CSF1	Colony stimulating factor 1 (macrophage)	PPS19402A
C02	Ssc.382	NM_214118	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)	PPS00543A
C03	Ssc.16151	NM_213842	CSF3	Colony stimulating factor 3 (granulocyte)	PPS00204A
C04	Ssc.35257	NM_001008691	CXCL10	Chemokine (C-X-C motif) ligand 10	PPS01275A
C05	Ssc.72492	NM_001128491	CXCL11	Chemokine (C-X-C motif) ligand 11	PPS04321A
C06	Ssc.26221	NM_001009580	CXCL12	Chemokine (C-X-C motif) ligand 12	PPS01281A
C07	Ssc.80308	XM_005652553	LOC396594	Growth-regulated protein homolog gamma	PPS00036B
C08	Ssc.26146	NM_001114289	CXCL9	Chemokine (C-X-C motif) ligand 9	PPS01982A
C09	Ssc.15870	NM_213806	FASLG	Fas ligand (TNF superfamily, member 6)	PPS00135A
C10	Ssc.78538	NM_001166319	IFN-ALPHA-4	Interferon-alpha-4	PPS04638A
C11	Ssc.95872	NM_001164860	IFN-ALPHA-5	Interferon, alpha 5	PPS04627A
C12	Ssc.42778	NM_001003923	IFNB1	Interferon beta	PPS01182B
D01	Ssc.4093	NM_213948	IFNG	Interferon-gamma	PPS00334A
D02	Ssc.148	NM_214041	IL10	Interleukin 10	PPS00445B
D03	Ssc.13	NM_213993	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)	PPS00395C
D04	Ssc.71	NM_214013	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)	PPS00416B
D05	Ssc.15877	NM_213803	IL13	Interleukin 13	PPS00131A

Position	UniGene	GenBank	Symbol	Description	Assay
D06	Ssc.8833	NM_214390	IL15	Interleukin 15	PPS00983A
D07	Ssc.18652	NM_213751	IL16	Interleukin 16	PPS00031A
D08	Ssc.42770	NM_001005729	IL17A	Interleukin 17A	PPS01245A
D09	Ssc.51662	XM_013978026	IL17F	Interleukin 17F	PPS01613A
D10	Ssc.20	NM_213997	IL18	Interleukin 18 (interferon-gamma-inducing factor)	PPS00399A
D11	Ssc.113	NM_214029	IL1A	Interleukin 1, alpha	PPS00434A
D12	Ssc.28829	NM_214055	IL1B	Interleukin 1 beta	PPS00461B
E01	Ssc.16224	NM_213861	IL2	Interleukin 2	PPS00228A
E02	Ssc.26323	NM_214415	IL21	Interleukin 21	PPS01023A
E03	Ssc.42733	XM_013997714	IL22	Interleukin 22	PPS01359A
E04	Ssc.56047	NM_001130236	IL23A	Interleukin 23, alpha subunit p19	PPS03430A
E05	Ssc.36782	NM_001007520	IL27	Interleukin 27	PPS01265B
E06	Ssc.15837	NM_214123	IL4	Interleukin 4	PPS00559A
E07	Ssc.528	NM_214205	IL5	Interleukin 5	PPS00721B
E08	Ssc.62	NM_214399	IL6	Interleukin 6 (interferon, beta 2)	PPS00991A
E09	Ssc.15904	NM_214135	IL7	Interleukin 7	PPS00581A
E10	Ssc.658	NM_213867	CXCL8	Interleukin 8	PPS00237A
E11	Ssc.51687	NM_001166043	IL9	Interleukin 9	PPS02144A
E12	Ssc.18993	NM_214189	INHBA	Inhibin, alpha	PPS00698A
F01	Ssc.52080	NM_214028	INHBA	Inhibin, beta A	PPS00433A
F02	Ssc.52878	NM_214402	LIF	Leukemia inhibitory factor (cholinergic differentiation factor)	PPS00994A
F03	N/A	XM_001929161	OSM	Oncostatin-M-like	PPS08074B
F04	Ssc.1137	XM_003131711	LOC100515857	C-C motif chemokine 3-like	PPS11539A
F05	Ssc.30515	XM_003131712	CCL23	C-C motif chemokine 23-like	PPS11613A
F06	N/A	XM_003131714	CCL16	C-C motif chemokine 16-like	PPS11759A
F07	N/A	XM_003122707	CNTF	Ciliary neurotrophic factor-like	PPS12687A
F08	Ssc.22002	XM_003129101	CXCL13	C-X-C motif chemokine 13-like	PPS14792A
F09	N/A	XM_003483282	THPO	Thrombopoietin	PPS15653A
F10	N/A	XR_305507	LOC100621682	Uncharacterized LOC100621682	PPS16395B
F11	Ssc.31160	XM_003480815	TNFSF9	Tumor necrosis factor ligand superfamily member 9-like	PPS16797A
F12	Ssc.53847	NM_001161434	CCL24	Chemokine ligand 24-like protein	PPS07954A
G01	Ssc.27595	NM_214453	LTA	Lymphotoxin alpha (TNF superfamily, member 1)	PPS01084A
G02	Ssc.15277	NM_001185138	LTB	Lymphotoxin beta (TNF superfamily, member 3)	PPS03442A
G03	Ssc.551	NM_001077213	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)	PPS00724A
G04	Ssc.23498	NM_214435	MSTN	Myostatin	PPS01003A
G05	Ssc.23321	NM_214023	SPP1	Secreted phosphoprotein 1	PPS00427A
G06	Ssc.76	NM_214015	TGFB1	Transforming growth factor, beta 1	PPS00418A
G07	Ssc.10287	XM_013978074	TGFB2	Transforming growth factor, beta 2	PPS00424B
G08	Ssc.100	NM_214022	TNF	Tumor necrosis factor	PPS00426A
G09	Ssc.12829	NM_001024696	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10	PPS01066A
G10	Ssc.47270	NM_001097498	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b	PPS01675A
G11	Ssc.23487	NM_001025217	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4	PPS01333A
G12	Ssc.57541	NM_214084	VEGFA	Vascular endothelial growth factor A	PPS00495A
H01	Ssc.10316	XM_003124280	ACTB	Actin, beta	PPS71698A
H02	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin	PPS00376A
H03	Ssc.16135	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPS00192A
H04	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPS00668B
H05	Ssc.27927	NM_001244068	RPL13A	Ribosomal protein L13a	PPS01574A
H06	N/A	SA_00133	SGDC	Pig Genomic DNA Contamination	PPS71596A
H07	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H08	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H09	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H10	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H11	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H12	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A

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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