

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

Horse Cytokines & Chemokines

Cat. no. 330231 PAEC-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 Horse 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 the 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. A set of controls present on each array enables data analysis using the $\Delta\Delta CT$ method of relative quantification as well as assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. 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	BMP2	BMP4	BMP6	BMP7	CCL11	CCL13	CCL2	CCL3	CCL5	CCL8	CSF3	CXCL1
B	CXCL10	CXCL2	CXCL6	CXCL9	FASLG	GPI	IFNG	IL10	IL12A	IL12B	IL13	IL15
C	IL16	IL17A	IL18	IL1A	IL1B	IL1RN	IL2	IL23A	IL4	IL5	IL6	CXCL8
D	TGFB2	MIF	CD40LG	IL20	IL24	CCL4	LTA	LTB	IL22	IL7	THPO	NAMPT
E	IL33	TNFSF11	LOC100060619	CCL24	CXCL16	CCL22	IL9	IL21	OSM	TNFSF10	LOC100064468	CD70
F	IL32	CCL25	C5	IL17F	CCL15	CCL14	NODAL	CCL16	CSF1	LIF	CCL28	CNTF
G	CXCL11	CCL20	CXCL13	IL3	CCL26	CCL19	CCL17	MSTN	TNF	TNFRSF11B	TNFSF13B	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	LOC100056766	EGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	N/A	XM_001493895	BMP2	Bone morphogenetic protein 2	PPE01174A
A02	Eca.12760	NM_001163970	BMP4	Bone morphogenetic protein 4	PPE00244A
A03	Eca.12936	XM_001493686	BMP6	Bone morphogenetic protein 6	PPE00153A
A04	Eca.17234	NM_001195158	BMP7	Bone morphogenetic protein 7	PPE00643A
A05	Eca.12655	NM_001081871	CCL11	Chemokine (C-C motif) ligand 11	PPE00165A
A06	Eca.12653	NM_001163887	CCL13	Chemokine (C-C motif) ligand 13	PPE00166A
A07	Eca.17895	NM_001081931	CCL2	Chemokine (C-C motif) ligand 2	PPE00321A
A08	Eca.471	NM_001114941	CCL3	Chemokine (C-C motif) ligand 3	PPE03114A
A09	Eca.1046	NM_001081863	CCL5	Chemokine (C-C motif) ligand 5	PPE00144A
A10	Eca.454	NM_001081864	CCL8	Chemokine (C-C motif) ligand 8	PPE00146B
A11	Eca.426	NM_001081860	CSF3	Colony stimulating factor 3 (granulocyte)	PPE00141B
A12	Eca.18382	XM_001916175	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)	PPE00308A
B01	Eca.570	NM_001114940	CXCL10	Chemokine (C-X-C motif) ligand 10	PPE00914A
B02	Eca.13036	NM_001143955	CXCL2	Chemokine (C-X-C motif) ligand 2	PPE07121A
B03	Eca.451	NM_001081886	CXCL6	Chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)	PPE00196B
B04	Eca.579	NM_001130078	CXCL9	Chemokine (C-X-C motif) ligand 9	PPE03123A
B05	Eca.16925	NM_001166039	FASLG	Fas ligand (TNF superfamily, member 6)	PPE01415A
B06	N/A	XM_001490607	GPI	Glucose-6-phosphate isomerase	PPE02916A
B07	Eca.721	NM_001081949	IFNG	Interferon, gamma	PPE00359A
B08	Eca.13090	NM_001082490	IL10	Interleukin 10	PPE00364A
B09	Eca.12627	NM_001082511	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)	PPE00385A
B10	Eca.12460	NM_001082516	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)	PPE00392A
B11	Eca.12480	NM_001143791	IL13	Interleukin 13	PPE00302A
B12	Eca.12733	NM_001163986	IL15	Interleukin 15	PPE00254A
C01	N/A	XM_001915967	IL16	Interleukin 16	PPE05594A
C02	Eca.12994	NM_001143792	IL17A	Interleukin 17A	PPE00327A
C03	Eca.3121	NM_001082512	IL18	Interleukin 18 (interferon-gamma-inducing factor)	PPE00386A
C04	Eca.13125	NM_001082500	IL1A	Interleukin 1, alpha	PPE05043A
C05	Eca.13475	NM_001082526	IL1B	Interleukin 1, beta	PPE00403A
C06	Eca.18515	NM_001082525	IL1RN	Interleukin 1 receptor antagonist	PPE00402A
C07	Eca.12635	NM_001085433	IL2	Interleukin 2	PPE00378A
C08	Eca.3086	NM_001082522	IL23A	Interleukin 23, alpha subunit p19	PPE00398A
C09	Eca.11253	NM_001082519	IL4	Interleukin 4	PPE00395B
C10	Eca.13068	NM_001082499	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)	PPE00374A
C11	Eca.12956	NM_001082496	IL6	Interleukin 6 (interferon, beta 2)	PPE00372A
C12	Eca.13119	NM_001083951	CXCL8	Interleukin 8	PPE00415B
D01	N/A	XM_001489351	TGFB2	Transforming growth factor beta-2-like	PPE07465A

Position	UniGene	GenBank	Symbol	Description	Assay
D02	N/A	XM_001489611	MIF	Macrophage migration inhibitory factor-like	PPE08729A
D03	N/A	XM_001490011	CD40LG	CD40 ligand-like	PPE09081A
D04	N/A	XM_003364925	IL20	Interleukin-20-like	PPE09461A
D05	N/A	XM_001489749	IL24	Interleukin-24-like	PPE09478A
D06	N/A	XM_001503888	CCL4	C-C motif chemokine 4-like	PPE10216A
D07	N/A	XM_001491333	LTA	Lymphotoxin-alpha-like	PPE10372A
D08	N/A	XM_001490122	LTB	Lymphotoxin-beta-like	PPE10387A
D09	N/A	XM_001491754	IL22	Interleukin-22-like	PPE10625A
D10	N/A	XM_001491850	IL7	Interleukin-7-like	PPE10686A
D11	N/A	XM_001498257	THPO	Thrombopoietin-like	PPE10700A
D12	N/A	XM_005609069	NAMPT	Nicotinamide phosphoribosyltransferase	PPE10889A
E01	N/A	XM_001492329	IL33	Interleukin-33-like	PPE10971A
E02	N/A	XM_001915535	TNFSF11	Tumor necrosis factor ligand superfamily member 11-like	PPE11086A
E03	N/A	XM_005605079	LOC100060619	C-C motif chemokine 21-like	PPE11214A
E04	N/A	XM_001493241	CCL24	C-C motif chemokine 24-like	PPE11433A
E05	N/A	XM_001504756	CXCL16	C-X-C motif chemokine 16-like	PPE11502A
E06	N/A	XM_001494004	CCL22	C-C motif chemokine 22-like	PPE11782A
E07	N/A	XM_001504354	IL9	Interleukin-9-like	PPE11891A
E08	N/A	XM_001503013	IL21	Interleukin-21-like	PPE12229A
E09	N/A	XM_001495055	OSM	Oncostatin-M-like	PPE12310A
E10	N/A	XM_001494088	TNFSF10	Tumor necrosis factor ligand superfamily member 10-like	PPE12431A
E11	N/A	XM_001495370	LOC100064468	Interferon alpha-2-like	PPE12461A
E12	N/A	XM_001496320	CD70	CD70 antigen-like	PPE12882A
F01	N/A	XM_001499705	IL32	Interleukin-32-like	PPE12893A
F02	N/A	XM_001497052	CCL25	C-C motif chemokine 25-like	PPE13227A
F03	N/A	XM_001916727	C5	Complement C5-like	PPE13479A
F04	N/A	XM_001498910	IL17F	Interleukin-17F-like	PPE13907A
F05	N/A	XM_001501323	CCL15	C-C motif chemokine 15-like	PPE14709A
F06	N/A	XM_001501338	CCL14	C-C motif chemokine 14-like	PPE14712A
F07	N/A	XM_001503737	NODAL	Nodal homolog	PPE15052A
F08	N/A	XM_001917910	CCL16	C-C motif chemokine 16-like	PPE15265A
F09	N/A	XM_005610548	CSF1	Colony stimulating factor 1 (macrophage)	PPE15384A
F10	N/A	XM_003365488	LIF	Leukemia inhibitory factor-like	PPE15754A
F11	N/A	XM_005604289	CCL28	Chemokine (C-C motif) ligand 28	PPE15889A
F12	N/A	XM_003362616	CNTF	Ciliary neurotrophic factor-like	PPE16059A
G01	N/A	NM_001278930	CXCL11	Chemokine (C-X-C motif) ligand 11	PPE16069A
G02	N/A	XM_003365131	CCL20	C-C motif chemokine 20-like	PPE16070A
G03	N/A	XM_003364667	CXCL13	C-X-C motif chemokine 13-like	PPE16150B
G04	N/A	XM_003362822	IL3	Interleukin-3-like	PPE16177A
G05	N/A	XM_003362700	CCL26	C-C motif chemokine 26-like	PPE16411A
G06	N/A	XM_003363979	CCL19	C-C motif chemokine 19-like	PPE16431A
G07	N/A	XM_003364585	CCL17	C-C motif chemokine 17-like	PPE16513A
G08	Eca.12515	NM_001081817	MSTN	Myostatin	PPE00068A
G09	Eca.13019	NM_001081819	TNF	Tumor necrosis factor	PPE00070A
G10	N/A	XM_001916099	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b	PPE05252A
G11	Eca.21712	NM_001242445	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b	PPE01124A
G12	Eca.12648	NM_001081821	VEGFA	Vascular endothelial growth factor A	PPE00074A
H01	Eca.20971	NM_001081838	ACTB	Actin, beta	PPE00105A
H02	Eca.13489	NM_001082502	B2M	Beta-2-microglobulin	PPE00377A
H03	Eca.487	NM_001163856	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPE00120A
H04	Eca.12727	XM_005614512	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPE00333A
H05	N/A	XM_001492042	LOC100056766	60S ribosomal protein L32-like	PPE09859A
H06	N/A horse	SA_00139	EGDC	Horse Genomic DNA Contamination	PPE16553A
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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