

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

Cow Cytokines & Chemokines

Cat. no. 330231 PABT-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 Cow 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 not 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	BMP2	BMP3	BMP6	BMP7	C5	CCL1	CCL11	CCL17	CCL19	CCL2	CCL20
B	CCL21	CCL22	CCL24	CCL3	CCL4	CCL5	CCL8	CD40LG	CD70	CNTF	CSF1	CSF2
C	CSF3	CTF1	CX3CL1	CXCL10	CXCL11	CXCL12	CXCL13	CXCL16	CXCL3	CXCL5	CXCL8	CXCL9
D	FASLG	GPI	GRO1	IFNG	IL10	IL12A	IL12B	IL13	IL15	IL16	IL17A	IL17F
E	IL18	IL1A	IL1B	IL1RN	IL2	IL21	IL22	IL23A	IL24	IL27	IL3	IL4
F	IL5	IL6	IL7	IL9	LIF	LOC517108	LTA	LTB	MIF	MSTN	NODAL	OSM
G	PF4	PPBP	SPP1	TGFB2	THPO	TNF	TNFRSF11B	TNFSF10	TNFSF11	TNFSF13B	VEGFA	XCL1
H	ACTB	GAPDH	HPRT1	TBP	YWHAZ	BGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	Bt.109637	NM_174742	ADIPOQ	Adiponectin, C1Q and collagen domain containing	PPB01219A
A02	Bt.29956	NM_001099141	BMP2	Bone morphogenetic protein 2	PPB13093B
A03	Bt.87529	NM_001192268	BMP3	Bone morphogenetic protein 3	PPB11438A
A04	N/A	XM_002697620	BMP6	Bone morphogenetic protein 6	PPB14010A
A05	Bt.40919	NM_001206015	BMP7	Bone morphogenetic protein 7	PPB12032A
A06	Bt.24055	NM_001166616	C5	Complement component 5	PPB05108A
A07	N/A	XM_001253011	CCL1	Chemokine (C-C motif) ligand 1	PPB15319A
A08	Bt.24326	NM_205773	CCL11	Chemokine (C-C motif) ligand 11	PPB01638B
A09	N/A	XM_001788943	CCL17	Chemokine (C-C motif) ligand 17	PPB16063A
A10	Bt.49624	NM_001034345	CCL19	Chemokine (C-C motif) ligand 19	PPB03961A
A11	Bt.2408	NM_174006	CCL2	Chemokine (C-C motif) ligand 2	PPB00208A
A12	Bt.9560	NM_174263	CCL20	Chemokine (C-C motif) ligand 20	PPB00582A
B01	Bt.26536	NM_001038076	CCL21	Chemokine (C-C motif) ligand 21	PPB04738A
B02	Bt.21088	NM_001099162	CCL22	Chemokine (C-C motif) ligand 22	PPB13812A
B03	Bt.32408	NM_001046596	CCL24	Chemokine (C-C motif) ligand 24	PPB13891A
B04	Bt.9974	NM_174511	CCL3	Chemokine (C-C motif) ligand 3	PPB00922A
B05	Bt.33440	NM_001075147	CCL4	Chemokine (C-C motif) ligand 4	PPB01853A
B06	Bt.552	NM_175827	CCL5	Chemokine (C-C motif) ligand 5	PPB01458A
B07	Bt.154	NM_174007	CCL8	Chemokine (C-C motif) ligand 8	PPB00209A
B08	Bt.49	NM_174624	CD40LG	CD40 ligand	PPB01062A
B09	N/A	XM_002688908	CD70	CD70 molecule	PPB07687A
B10	N/A	XM_003583194	CNTF	Ciliary neurotrophic factor	PPB20418A
B11	Bt.366	NM_174026	CSF1	Colony stimulating factor 1 (macrophage)	PPB00240A
B12	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)	PPB00241A
C01	Bt.4660	NM_174028	CSF3	Colony stimulating factor 3 (granulocyte)	PPB00242A
C02	Bt.45471	NM_001192384	CTF1	Cardiotrophin 1	PPB06178A
C03	N/A	XM_002694885	CX3CL1	Chemokine (C-X3-C motif) ligand 1-like	PPB16586A
C04	Bt.60947	NM_001046551	CXCL10	Chemokine (C-X-C motif) ligand 10	PPB13115A
C05	Bt.18368	NM_001113173	CXCL11	Chemokine (C-X-C motif) ligand 11	PPB06701A
C06	Bt.105169	NM_001113174	CXCL12	Chemokine (C-X-C motif) ligand 12	PPB12643A
C07	Bt.28088	NM_001015576	CXCL13	Chemokine (C-X-C motif) ligand 13	PPB04953A
C08	Bt.57568	NM_001046095	CXCL16	Chemokine (C-X-C motif) ligand 16	PPB04950A
C09	Bt.53864	NM_001046513	CXCL3	Chemokine (C-X-C motif) ligand 3	PPB20263A
C10	Bt.7165	NM_174300	CXCL5	Chemokine (C-X-C motif) ligand 5	PPB00630A
C11	Bt.49740	NM_173925	CXCL8	Interleukin 8	PPB00086A
C12	Bt.37553	NM_001113172	CXCL9	Chemokine (C-X-C motif) ligand 9	PPB05842A
D01	Bt.28024	NM_001098859	FASLG	Fas ligand	PPB01735A
D02	Bt.49587	NM_001040471	GPI	Glucose-6-phosphate isomerase	PPB00071A
D03	Bt.611	NM_175700	GRO1	Chemokine (C-X-C motif) ligand 2	PPB00322A
D04	Bt.188	NM_174086	IFNG	Interferon, gamma	PPB00336A
D05	Bt.4723	NM_174088	IL10	Interleukin 10	PPB00339A
D06	Bt.524	NM_174355	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)	PPB00709A
D07	Bt.523	NM_174356	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)	PPB00710A

Position	UniGene	GenBank	Symbol	Description	Assay
D08	Bt.12928	NM_174089	IL13	Interleukin 13	PPB00340A
D09	Bt.522	NM_174090	IL15	Interleukin 15	PPB00341A
D10	Bt.26527	NM_001075253	IL16	Interleukin 16	PPB02870A
D11	Bt.12772	NM_001008412	IL17A	Interleukin 17A	PPB01218A
D12	Bt.22668	NM_001192082	IL17F	Interleukin 17F	PPB02753A
E01	Bt.234	NM_174091	IL18	Interleukin 18 (interferon-gamma-inducing factor)	PPB00342A
E02	Bt.191	NM_174092	IL1A	Interleukin 1, alpha	PPB00343A
E03	Bt.4856	NM_174093	IL1B	Interleukin 1, beta	PPB00344A
E04	Bt.4199	NM_174357	IL1RN	Interleukin 1 receptor antagonist	PPB00711A
E05	Bt.341	NM_180997	IL2	Interleukin 2	PPB00080A
E06	Bt.23583	NM_198832	IL21	Interleukin 21	PPB01617A
E07	Bt.61414	NM_001098379	IL22	Interleukin 22	PPB03434A
E08	Bt.102530	NM_001205688	IL23A	Interleukin 23, alpha subunit p19	PPB04688A
E09	N/A	XM_010813062	IL24	Interleukin 24	PPB08344A
E10	Bt.101510	NM_001164653	IL27	Interleukin 27	PPB13061A
E11	Bt.538	NM_173920	IL3	Interleukin 3	PPB00081A
E12	Bt.423	NM_173921	IL4	Interleukin 4	PPB00082A
F01	Bt.5	NM_173922	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)	PPB00083A
F02	Bt.3686	NM_173923	IL6	Interleukin 6 (interferon, beta 2)	PPB00084A
F03	Bt.12751	NM_173924	IL7	Interleukin 7	PPB00085A
F04	N/A	XM_010798460	IL9	Interleukin 9	PPB12474A
F05	Bt.493	NM_173931	LIF	Leukemia inhibitory factor (cholinergic differentiation factor)	PPB00096A
F06	N/A	XM_010798599	LOC517108	Interferon-alphaomega-like	PPB16582A
F07	Bt.37345	NM_001013401	LTA	Lymphotoxin alpha (TNF superfamily, member 1)	PPB00100A
F08	Bt.105000	XM_002697371	LTB	Lymphotoxin beta (TNF superfamily, member 3)	PPB08888A
F09	Bt.15528	NM_001033608	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)	PPB00108A
F10	Bt.605	NM_001001525	MSTN	Myostatin	PPB00301A
F11	Bt.111881	NM_001205982	NODAL	Nodal homolog (mouse)	PPB09050A
F12	Bt.45038	NM_175713	OSM	Oncostatin M	PPB01383A
G01	Bt.11581	NM_001101062	PF4	Platelet factor 4	PPB03440A
G02	N/A	XM_002688351	PPBP	Pro-platelet basic protein (chemokine (C-X-C motif) ligand 7)	PPB12604A
G03	Bt.10536	NM_174187	SPP1	Secreted phosphoprotein 1	PPB00474A
G04	Bt.6438	NM_001113252	TGFB2	Transforming growth factor, beta 2	PPB09815A
G05	Bt.65061	NM_001166040	THPO	Thrombopoietin	PPB10959A
G06	Bt.12756	NM_173966	TNF	Tumor necrosis factor	PPB00153A
G07	Bt.40061	NM_001098056	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b	PPB07970A
G08	N/A	XM_002684917	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10	PPB03218A
G09	Bt.112393	NM_001205770	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11	PPB05782A
G10	Bt.24855	NM_001114506	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b	PPB02121A
G11	Bt.4138	NM_174216	VEGFA	Vascular endothelial growth factor A	PPB00517A
G12	Bt.8144	NM_175716	XCL1	Chemokine (C motif) ligand 2	PPB01386A
H01	Bt.14186	NM_173979	ACTB	Actin, beta	PPB00173A
H02	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPB00298A
H03	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPB00330A
H04	Bt.22662	NM_001075742	TBP	TATA box binding protein	PPB06797A
H05	Bt.111451	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	PPB01343A
H06	N/A	SA_00137	BGDC	Cow Genomic DNA Contamination	PPB71596A
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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