

RT² Profiler PCR Array (Rotor-Gene® Format)

Cow Cytokines & Chemokines

Cat. no. 330231 PABT-150ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

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*.



Sample & Assay Technologies

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

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 cyclers (see table above).

Note: Open the package and store the products appropriately immediately on receipt.

Array layout

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
1	Bt.109637	NM_174742	ADIPOQ	Adiponectin, C1Q and collagen domain containing
2	Bt.29956	NM_001099141	BMP2	Bone morphogenetic protein 2
3	Bt.87529	NM_001192268	BMP3	Bone morphogenetic protein 3
4	N/A	XM_002697620	BMP6	Bone morphogenetic protein 6
5	Bt.40919	NM_001206015	BMP7	Bone morphogenetic protein 7
6	Bt.24055	NM_001166616	C5	Complement component 5
7	N/A	XM_001253011	CCL1	Chemokine (C-C motif) ligand 1
8	Bt.24326	NM_205773	CCL11	Chemokine (C-C motif) ligand 11
9	N/A	XM_001788943	CCL17	Chemokine (C-C motif) ligand 17
10	Bt.49624	NM_001034345	CCL19	Chemokine (C-C motif) ligand 19
11	Bt.2408	NM_174006	CCL2	Chemokine (C-C motif) ligand 2
12	Bt.9560	NM_174263	CCL20	Chemokine (C-C motif) ligand 20
13	Bt.26536	NM_001038076	CCL21	Chemokine (C-C motif) ligand 21
14	Bt.21088	NM_001099162	CCL22	Chemokine (C-C motif) ligand 22
15	Bt.32408	NM_001046596	CCL24	Chemokine (C-C motif) ligand 24
16	Bt.9974	NM_174511	CCL3	Chemokine (C-C motif) ligand 3
17	Bt.33440	NM_001075147	CCL4	Chemokine (C-C motif) ligand 4
18	Bt.552	NM_175827	CCL5	Chemokine (C-C motif) ligand 5
19	Bt.154	NM_174007	CCL8	Chemokine (C-C motif) ligand 8
20	Bt.49	NM_174624	CD40LG	CD40 ligand
21	N/A	XM_002688908	CD70	CD70 molecule
22	N/A	XM_003583194	CNTF	Ciliary neurotrophic factor
23	Bt.366	NM_174026	CSF1	Colony stimulating factor 1 (macrophage)
24	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
25	Bt.4660	NM_174028	CSF3	Colony stimulating factor 3 (granulocyte)
26	Bt.45471	NM_001192384	CTF1	Cardiotrophin 1
27	N/A	XM_002694885	CX3CL1	Chemokine (C-X3-C motif) ligand 1-like
28	Bt.60947	NM_001046551	CXCL10	Chemokine (C-X-C motif) ligand 10
29	Bt.18368	NM_001113173	CXCL11	Chemokine (C-X-C motif) ligand 11
30	Bt.105169	NM_001113174	CXCL12	Chemokine (C-X-C motif) ligand 12
31	Bt.28088	NM_001015576	CXCL13	Chemokine (C-X-C motif) ligand 13
32	Bt.57568	NM_001046095	CXCL16	Chemokine (C-X-C motif) ligand 16
33	Bt.53864	NM_001046513	CXCL3	Chemokine (C-X-C motif) ligand 3
34	Bt.7165	NM_174300	CXCL5	Chemokine (C-X-C motif) ligand 5
35	Bt.49740	NM_173925	CXCL8	Interleukin 8
36	Bt.37553	NM_001113172	CXCL9	Chemokine (C-X-C motif) ligand 9
37	Bt.28024	NM_001098859	FASLG	Fas ligand
38	Bt.49587	NM_001040471	GPI	Glucose-6-phosphate isomerase

Position	UniGene	GenBank	Symbol	Description
39	Bt.611	NM_175700	GRO1	Chemokine (C-X-C motif) ligand 2
40	Bt.188	NM_174086	IFNG	Interferon, gamma
41	Bt.4723	NM_174088	IL10	Interleukin 10
42	Bt.524	NM_174355	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)
43	Bt.523	NM_174356	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
44	Bt.12928	NM_174089	IL13	Interleukin 13
45	Bt.522	NM_174090	IL15	Interleukin 15
46	Bt.26527	NM_001075253	IL16	Interleukin 16
47	Bt.12772	NM_001008412	IL17A	Interleukin 17A
48	Bt.22668	NM_001192082	IL17F	Interleukin 17F
49	Bt.234	NM_174091	IL18	Interleukin 18 (interferon-gamma-inducing factor)
50	Bt.191	NM_174092	IL1A	Interleukin 1, alpha
51	Bt.4856	NM_174093	IL1B	Interleukin 1, beta
52	Bt.4199	NM_174357	IL1RN	Interleukin 1 receptor antagonist
53	Bt.341	NM_180997	IL2	Interleukin 2
54	Bt.23583	NM_198832	IL21	Interleukin 21
55	Bt.61414	NM_001098379	IL22	Interleukin 22
56	Bt.102530	NM_001205688	IL23A	Interleukin 23, alpha subunit p19
57	N/A	XM_010813062	IL24	Interleukin 24
58	Bt.101510	NM_001164653	IL27	Interleukin 27
59	Bt.538	NM_173920	IL3	Interleukin 3
60	Bt.423	NM_173921	IL4	Interleukin 4
61	Bt.5	NM_173922	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
62	Bt.3686	NM_173923	IL6	Interleukin 6 (interferon, beta 2)
63	Bt.12751	NM_173924	IL7	Interleukin 7
64	N/A	XM_010798460	IL9	Interleukin 9
65	Bt.493	NM_173931	LIF	Leukemia inhibitory factor (cholinergic differentiation factor)
66	N/A	XM_010798599	LOC517108	Interferon-alphaomega-like
67	Bt.37345	NM_001013401	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
68	Bt.105000	XM_002697371	LTB	Lymphotoxin beta (TNF superfamily, member 3)
69	Bt.15528	NM_001033608	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
70	Bt.605	NM_001001525	MSTN	Myostatin
71	Bt.111881	NM_001205982	NODAL	Nodal homolog (mouse)
72	Bt.45038	NM_175713	OSM	Oncostatin M
73	Bt.11581	NM_001101062	PF4	Platelet factor 4
74	N/A	XM_002688351	PPBP	Pro-platelet basic protein (chemokine (C-X-C motif) ligand 7)
75	Bt.10536	NM_174187	SPP1	Secreted phosphoprotein 1
76	Bt.6438	NM_001113252	TGFB2	Transforming growth factor, beta 2
77	Bt.65061	NM_001166040	THPO	Thrombopoietin
78	Bt.12756	NM_173966	TNF	Tumor necrosis factor

Position	UniGene	GenBank	Symbol	Description
79	Bt.40061	NM_001098056	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
80	N/A	XM_002684917	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
81	Bt.112393	NM_001205770	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
82	Bt.24855	NM_001114506	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
83	Bt.4138	NM_174216	VEGFA	Vascular endothelial growth factor A
84	Bt.8144	NM_175716	XCL1	Chemokine (C motif) ligand 2
85	Bt.14186	NM_173979	ACTB	Actin, beta
86	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
87	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
88	Bt.22662	NM_001075742	TBP	TATA box binding protein
89	Bt.111451	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
90	N/A	SA_00137	BGDC	Cow Genomic DNA Contamination
91	N/A	SA_00104	RTC	Reverse Transcription Control
92	N/A	SA_00104	RTC	Reverse Transcription Control
93	N/A	SA_00104	RTC	Reverse Transcription Control
94	N/A	SA_00103	PPC	Positive PCR Control
95	N/A	SA_00103	PPC	Positive PCR Control
96	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 ROX [™] FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* 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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