

RT² Profiler PCR Array (Rotor-Gene® Format)

Cow Innate & Adaptive Immune Responses

Cat. no. 330231 PABT-052ZR

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 Innate & Adaptive Immune Responses RT² Profiler™ PCR Array profiles the expression of 84 genes involved in the host response to bacterial infection and sepsis. This array includes genes related to the IL-1R and Toll-like Receptor (TLR) Signaling Pathways including IL-1R and TLR genes involved in the detection of pathogens. Genes related to the host defense to bacteria are represented on this array including genes involved in the detection of bacteria, and genes involved in the acute-phase response, complement activation, the inflammatory response, and the antibacterial humoral response. Genes involved in the innate immune response and septic shock are also included on this array. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to the innate and adaptive immune responses with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.



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.17678	NM_001034466	APCS	Amyloid P component, serum
2	Bt.88540	NM_001193296	BOLA	MHC class I heavy chain
3	Bt.88540	NM_001040554	BOLA-A	Major histocompatibility complex, class I, A -A
4	Bt.19562	NM_001040469	C3	Complement component 3
5	Bt.52059	XM_002692921	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
6	Bt.2408	NM_174006	CCL2	Chemokine (C-C motif) ligand 2
7	Bt.552	NM_175827	CCL5	Chemokine (C-C motif) ligand 5
8	Bt.29981	NM_001100293	CCR4	Chemokine (C-C motif) receptor 4
9	Bt.21331	NM_001011672	CCR5	Chemokine (C-C motif) receptor 5
10	Bt.106551	NM_001194961	CCR6	Chemokine (C-C motif) receptor 6
11	Bt.30825	NM_001194962	CCR8	Chemokine (C-C motif) receptor 8
12	Bt.4285	NM_174008	CD14	CD14 molecule
13	Bt.30898	NM_001103225	CD4	CD4 molecule
14	Bt.42498	NM_001105611	CD40	CD40 molecule, TNF receptor superfamily member 5
15	Bt.49	NM_174624	CD40LG	CD40 ligand
16	Bt.27986	NM_001206439	CD80	CD80 molecule
17	Bt.24707	NM_001038017	CD86	CD86 molecule
18	Bt.50	NM_174015	CD8A	CD8a molecule
19	Bt.23701	NM_001144097	CRP	C-reactive protein, pentraxin-related
20	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
21	Bt.60947	NM_001046551	CXCL10	Chemokine (C-X-C motif) ligand 10
22	Bt.49740	NM_173925	CXCL8	Interleukin 8
23	Bt.111897	NM_001011673	CXCR3	Chemokine (C-X-C motif) receptor 3
24	N/A	XM_002689480	DDX58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
25	Bt.4345	NM_174662	FAS	Fas (TNF receptor superfamily, member 6)
26	Bt.28024	NM_001098859	FASLG	Fas ligand
27	Bt.59537	NM_001045933	FOXP3	Forkhead box P3
28	Bt.31666	NM_001076804	GATA3	GATA binding protein 3
29	Bt.5372	NM_174348	ICAM1	Intercellular adhesion molecule 1
30	Bt.4557	NM_174552	IFNAR1	Interferon (alpha, beta and omega) receptor 1
31	Bt.45040	NM_174350	IFNB1	Interferon, beta 1, fibroblast
32	Bt.188	NM_174086	IFNG	Interferon, gamma
33	Bt.49564	NM_001035063	IFNGR1	Interferon gamma receptor 1
34	Bt.4723	NM_174088	IL10	Interleukin 10
35	Bt.12928	NM_174089	IL13	Interleukin 13
36	Bt.522	NM_174090	IL15	Interleukin 15
37	Bt.12772	NM_001008412	IL17A	Interleukin 17A
38	Bt.234	NM_174091	IL18	Interleukin 18 (interferon-gamma-inducing factor)

Position	UniGene	GenBank	Symbol	Description
39	Bt.191	NM_174092	IL1A	Interleukin 1, alpha
40	Bt.4856	NM_174093	IL1B	Interleukin 1, beta
41	Bt.3476	NM_001206735	IL1R1	Interleukin 1 receptor, type I
42	Bt.341	NM_180997	IL2	Interleukin 2
43	Bt.102530	NM_001205688	IL23A	Interleukin 23, alpha subunit p19
44	Bt.423	NM_173921	IL4	Interleukin 4
45	Bt.3686	NM_173923	IL6	Interleukin 6 (interferon, beta 2)
46	Bt.5221	NM_001040555	IRAK1	Interleukin-1 receptor-associated kinase 1
47	Bt.45332	NM_001029845	IRF3	Interferon regulatory factor 3
48	Bt.96672	NM_001105040	IRF7	Interferon regulatory factor 7
49	Bt.35830	NM_001039957	ITGAM	Integrin, alpha M (complement component 3 receptor 3 subunit)
50	N/A	XM_003586385	JAK2	Janus kinase 2
51	Bt.62638	NM_001076841	LOC512672	Major histocompatibility complex, class I
52	Bt.65666	NM_001206459	LOC616942	Major histocompatibility complex, class I, A-like
53	Bt.45646	NM_001046517	LY96	Lymphocyte antigen 96
54	Bt.64645	NM_001078159	LYZ	Lysozyme
55	Bt.109487	NM_175793	MAPK1	Mitogen-activated protein kinase 1
56	Bt.5687	NM_001110018	MAPK3	Mitogen-activated protein kinase 3
57	Bt.360	NM_174107	MBL2	Mannose-binding lectin (protein C) 2, soluble
58	Bt.23901	NM_001113298	MPO	Myeloperoxidase
59	Bt.4675	NM_173940	MX1	Myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
60	Bt.48995	NM_001014382	MYD88	Myeloid differentiation primary response gene (88)
61	Bt.60919	NM_001076409	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
62	Bt.9027	NM_001045868	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
63	Bt.61644	NM_001102219	NLRP3	NLR family, pyrin domain containing 3
64	Bt.30778	NM_001002889	NOD2	Nucleotide-binding oligomerization domain containing 2
65	Bt.49360	NM_001083451	RORC	RAR-related orphan receptor C
66	Bt.5373	NM_174652	SLC11A1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
67	Bt.33292	NM_001077900	STAT1	Signal transducer and activator of transcription 1, 91kDa
68	Bt.15334	NM_001012671	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
69	Bt.103666	NM_001083692	STAT4	Signal transducer and activator of transcription 4
70	Bt.106674	NM_001205501	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
71	Bt.44725	NM_001192140	TBX21	T-box 21
72	Bt.47460	NM_001030301	TICAM1	Toll-like receptor adaptor molecule 1
73	Bt.45021	NM_001046504	TLR1	Toll-like receptor 1
74	Bt.8945	NM_174197	TLR2	Toll-like receptor 2
75	Bt.12298	NM_001008664	TLR3	Toll-like receptor 3
76	Bt.9030	NM_174198	TLR4	Toll-like receptor 4
77	Bt.66307	NM_001040501	TLR5	Toll-like receptor 5

Position	UniGene	GenBank	Symbol	Description
78	Bt.45021	NM_001001159	TLR6	Toll-like receptor 6
79	Bt.111931	NM_001033761	TLR7	Toll-like receptor 7
80	Bt.45022	NM_001033937	TLR8	Toll-like receptor 8
81	Bt.12810	NM_183081	TLR9	Toll-like receptor 9
82	Bt.12756	NM_173966	TNF	Tumor necrosis factor
83	Bt.89201	NM_001034661	TRAF6	TNF receptor-associated factor 6
84	Bt.23803	NM_001113764	TYK2	Tyrosine kinase 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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