

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

Cow Innate & Adaptive Immune Responses

Cat. no. 330231 PABT-052Z

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 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 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	APCS	BOLA	BOLA-A	C3	CASP1	CCL2	CCL5	CCR4	CCR5	CCR6	CCR8	CD14
B	CD4	CD40	CD40LG	CD80	CD86	CD8A	CRP	CSF2	CXCL10	CXCL8	CXCR3	DDX58
C	FAS	FASLG	FOXP3	GATA3	ICAM1	IFNAR1	IFNB1	IFNG	IFNGR1	IL10	IL13	IL15
D	IL17A	IL18	IL1A	IL1B	IL1R1	IL2	IL23A	IL4	IL6	IRAK1	IRF3	IRF7
E	ITGAM	JAK2	LOC512672	LOC616942	LY96	LYZ	MAPK1	MAPK3	MBL2	MPO	MX1	MYD88
F	NFKB1	NFKBIA	NLRP3	NOD2	RORC	SLC11A1	STAT1	STAT3	STAT4	STAT6	TBX21	TICAM1
G	TLR1	TLR2	TLR3	TLR4	TLR5	TLR6	TLR7	TLR8	TLR9	TNF	TRAF6	TYK2
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.17678	NM_001034466	APCS	Amyloid P component, serum	PPB06039A
A02	Bt.88540	NM_001193296	BOLA	MHC class I heavy chain	PPB02608A
A03	Bt.88540	NM_001040554	BOLA-A	Major histocompatibility complex, class I, A -A	PPB14962A
A04	Bt.19562	NM_001040469	C3	Complement component 3	PPB00002A
A05	Bt.52059	XM_002692921	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)	PPB05926A
A06	Bt.2408	NM_174006	CCL2	Chemokine (C-C motif) ligand 2	PPB00208A
A07	Bt.552	NM_175827	CCL5	Chemokine (C-C motif) ligand 5	PPB01458A
A08	Bt.29981	NM_001100293	CCR4	Chemokine (C-C motif) receptor 4	PPB01847A
A09	Bt.21331	NM_001011672	CCR5	Chemokine (C-C motif) receptor 5	PPB01954A
A10	Bt.106551	NM_001194961	CCR6	Chemokine (C-C motif) receptor 6	PPB07316A
A11	Bt.30825	NM_001194962	CCR8	Chemokine (C-C motif) receptor 8	PPB01828A
A12	Bt.4285	NM_174008	CD14	CD14 molecule	PPB00211A
B01	Bt.30898	NM_001103225	CD4	CD4 molecule	PPB01725A
B02	Bt.42498	NM_001105611	CD40	CD40 molecule, TNF receptor superfamily member 5	PPB01298A
B03	Bt.49	NM_174624	CD40LG	CD40 ligand	PPB01062A
B04	Bt.27986	NM_001206439	CD80	CD80 molecule	PPB01748A
B05	Bt.24707	NM_001038017	CD86	CD86 molecule	PPB01851A
B06	Bt.50	NM_174015	CD8A	CD8a molecule	PPB00221A
B07	Bt.23701	NM_001144097	CRP	C-reactive protein, pentraxin-related	PPB08544A
B08	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)	PPB00241A
B09	Bt.60947	NM_001046551	CXCL10	Chemokine (C-X-C motif) ligand 10	PPB13115A
B10	Bt.49740	NM_173925	CXCL8	Interleukin 8	PPB00086A
B11	Bt.111897	NM_001011673	CXCR3	Chemokine (C-X-C motif) receptor 3	PPB01955A
B12	N/A	XM_002689480	DDX58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	PPB02226A
C01	Bt.4345	NM_174662	FAS	Fas (TNF receptor superfamily, member 6)	PPB01111A
C02	Bt.28024	NM_001098859	FASLG	Fas ligand	PPB01735A
C03	Bt.59537	NM_001045933	FOXP3	Forkhead box P3	PPB02762A
C04	Bt.31666	NM_001076804	GATA3	GATA binding protein 3	PPB02400A
C05	Bt.5372	NM_174348	ICAM1	Intercellular adhesion molecule 1	PPB00701A
C06	Bt.4557	NM_174552	IFNAR1	Interferon (alpha, beta and omega) receptor 1	PPB00975A
C07	Bt.45040	NM_174350	IFNB1	Interferon, beta 1, fibroblast	PPB00703A
C08	Bt.188	NM_174086	IFNG	Interferon, gamma	PPB00336A
C09	Bt.49564	NM_001035063	IFNGR1	Interferon gamma receptor 1	PPB03758A
C10	Bt.4723	NM_174088	IL10	Interleukin 10	PPB00339A
C11	Bt.12928	NM_174089	IL13	Interleukin 13	PPB00340A
C12	Bt.522	NM_174090	IL15	Interleukin 15	PPB00341A
D01	Bt.12772	NM_001008412	IL17A	Interleukin 17A	PPB01218A
D02	Bt.234	NM_174091	IL18	Interleukin 18 (interferon-gamma-inducing factor)	PPB00342A
D03	Bt.191	NM_174092	IL1A	Interleukin 1, alpha	PPB00343A
D04	Bt.4856	NM_174093	IL1B	Interleukin 1, beta	PPB00344A
D05	Bt.3476	NM_001206735	IL1R1	Interleukin 1 receptor, type I	PPB06529A
D06	Bt.341	NM_180997	IL2	Interleukin 2	PPB00080A
D07	Bt.102530	NM_001205688	IL23A	Interleukin 23, alpha subunit p19	PPB04688A
D08	Bt.423	NM_173921	IL4	Interleukin 4	PPB00082A

Position	UniGene	GenBank	Symbol	Description	Assay
D09	Bt.3686	NM_173923	IL6	Interleukin 6 (interferon, beta 2)	PPB00084A
D10	Bt.5221	NM_001040555	IRAK1	Interleukin-1 receptor-associated kinase 1	PPB09770A
D11	Bt.45332	NM_001029845	IRF3	Interferon regulatory factor 3	PPB06854A
D12	Bt.96672	NM_001105040	IRF7	Interferon regulatory factor 7	PPB15819A
E01	Bt.35830	NM_001039957	ITGAM	Integrin, alpha M (complement component 3 receptor 3 subunit)	PPB01741A
E02	N/A	XM_003586385	JAK2	Janus kinase 2	PPB08186A
E03	Bt.62638	NM_001076841	LOC512672	Major histocompatibility complex, class I	PPB16477A
E04	Bt.65666	NM_001206459	LOC616942	Major histocompatibility complex, class I, A-like	PPB17160A
E05	Bt.45646	NM_001046517	LY96	Lymphocyte antigen 96	PPB12619A
E06	Bt.64645	NM_001078159	LYZ	Lysozyme	PPB14759A
E07	Bt.109487	NM_175793	MAPK1	Mitogen-activated protein kinase 1	PPB01420A
E08	Bt.5687	NM_001110018	MAPK3	Mitogen-activated protein kinase 3	PPB09138A
E09	Bt.360	NM_174107	MBL2	Mannose-binding lectin (protein C) 2, soluble	PPB00366A
E10	Bt.23901	NM_001113298	MPO	Myeloperoxidase	PPB04769A
E11	Bt.4675	NM_173940	MX1	Myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)	PPB00116A
E12	Bt.48995	NM_001014382	MYD88	Myeloid differentiation primary response gene (88)	PPB01888A
F01	Bt.60919	NM_001076409	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	PPB13498A
F02	Bt.9027	NM_001045868	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	PPB00990A
F03	Bt.61644	NM_001102219	NLRP3	NLR family, pyrin domain containing 3	PPB10939A
F04	Bt.30778	NM_001002889	NOD2	Nucleotide-binding oligomerization domain containing 2	PPB01878A
F05	Bt.49360	NM_001083451	RORC	RAR-related orphan receptor C	PPB08530A
F06	Bt.5373	NM_174652	SLC11A1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1	PPB01099A
F07	Bt.33292	NM_001077900	STAT1	Signal transducer and activator of transcription 1, 91kDa	PPB04601A
F08	Bt.15334	NM_001012671	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)	PPB03726A
F09	Bt.103666	NM_001083692	STAT4	Signal transducer and activator of transcription 4	PPB06650A
F10	Bt.106674	NM_001205501	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced	PPB01565A
F11	Bt.44725	NM_001192140	TBX21	T-box 21	PPB11103A
F12	Bt.47460	NM_001030301	TICAM1	Toll-like receptor adaptor molecule 1	PPB04444A
G01	Bt.45021	NM_001046504	TLR1	Toll-like receptor 1	PPB12433A
G02	Bt.8945	NM_174197	TLR2	Toll-like receptor 2	PPB00488A
G03	Bt.12298	NM_001008664	TLR3	Toll-like receptor 3	PPB00489A
G04	Bt.9030	NM_174198	TLR4	Toll-like receptor 4	PPB00490A
G05	Bt.66307	NM_001040501	TLR5	Toll-like receptor 5	PPB01881A
G06	Bt.45021	NM_001001159	TLR6	Toll-like receptor 6	PPB01818A
G07	Bt.111931	NM_001033761	TLR7	Toll-like receptor 7	PPB01916A
G08	Bt.45022	NM_001033937	TLR8	Toll-like receptor 8	PPB09271A
G09	Bt.12810	NM_183081	TLR9	Toll-like receptor 9	PPB01152A
G10	Bt.12756	NM_173966	TNF	Tumor necrosis factor	PPB00153A
G11	Bt.89201	NM_001034661	TRAF6	TNF receptor-associated factor 6	PPB11210A
G12	Bt.23803	NM_001113764	TYK2	Tyrosine kinase 2	PPB05251A
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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN® (QIAGEN Group); Applied Biosystems®, ViiA™, StepOnePlus™, ROX™ (Applied Biosystems Corporation or its subsidiaries); Bio-Rad®, iCycler®, iQ™, MyiQ™, Chromo4™, CFX96™, DNA Engine Opticon®, CFX384™ (Bio-Rad Laboratories, Inc.); Stratagene®, Mx3005P®, Mx3000P®, Mx4000® (Stratagene); Eppendorf®, Mastercycler® (Eppendorf AG); Roche®, LightCycler® (Roche Group); Fluidigm® BioMark™ (Fluidigm Corporation); SYBR® (Molecular Probes, Inc.).

1066029 03/2011 © 2011 QIAGEN, all rights reserved.

www.qiagen.com

Canada ■ 800-572-9613

China ■ 8621-3865-3865

Denmark ■ 80-885945

Finland ■ 0800-914416

France ■ 01-60-920-930

Germany ■ 02103-29-12000

Hong Kong ■ 800 933 965

Ireland ■ 1800 555 049

Italy ■ 800-787980

Japan ■ 03-6890-7300

Korea (South) ■ 080-000-7145

Luxembourg ■ 8002 2076

Mexico ■ 01-800-7742-436

The Netherlands ■ 0800 0229592

Norway ■ 800-18859

Singapore ■ 1800-742-4368

Spain ■ 91-630-7050

Sweden ■ 020-790282

Switzerland ■ 055-254-22-11

UK ■ 01293-422-911

USA ■ 800-426-8157

Australia ■ 1-800-243-800

Austria ■ 0800/281010

Belgium ■ 0800-79612

Brazil ■ 0800-557779



Sample & Assay Technologies