

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

Chicken Innate & Adaptive Immune Responses

Cat. no. 330231 PAGG-052ZA

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 Chicken 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, research studies 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	C3	CSAR1	CAMP	CASP1	CASP8	CCL4	CCL5	CCR4	CCR5	CCR6	CCR8	CD14
B	CD28	CD4	CD40	CD40LG	CD80	CD86	CD8A	CRP	CSF2	CXCL12	CXCR4	FAS
C	FASLG	GATA3	IFIH1	IFNA3	IFNAR1	IFNB	IFNG	IFNGR1	IL10	IL13	IL15	IL18
D	IL18	IL1R1	IL2	IL4	IL5	IL6	IL8	IRAK4	IRF1	IRF6	IRF7	ITGB2
E	JAK2	JUN	LITAF	LOC100859040	LOC100859196	LOC430113	LTF	LY96	LYZ	MAPK1	MAPK14	MAPK8
F	MBL2	MPO	MX1	MYD88	NFKB1	NFKBIA	NLRP3	NOD1	PTGS2	RAG1	SLC11A1	STAT1
G	STAT3	STAT4	TICAM1	TLR15	TLR21	TLR2-2	TLR3	TLR4	TLR5	TLR6	TLR7	TRAF6
H	ACTB	H6PD	HMBS	RPL4	UBC	GGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Gga.2510	NM_205405	C3	Complement component 3
A02	N/A	XM_428039	C5AR1	Complement component 5a receptor 1
A03	Gga.28679	NM_001024830	CAMP	Cathelicidin antimicrobial peptide
A04	Gga.10204	NM_204924	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
A05	Gga.2451	NM_204592	CASP8	Caspase 8, apoptosis-related cysteine peptidase
A06	Gga.255	NM_204720	CCL4	Chemokine (C-C motif) ligand 4
A07	Gga.9563	NM_001045832	CCL5	Chemokine (C-C motif) ligand 5
A08	N/A	XM_426017	CCR4	Chemokine (C-C motif) receptor 4
A09	Gga.32299	NM_001045834	CCR5	Chemokine (C-C motif) receptor 5
A10	Gga.25254	NM_001114081	CCR6	Chemokine (C-C motif) receptor 6
A11	Gga.8983	NM_001030991	CCR8	Chemokine (C-C motif) receptor 8
A12	Gga.47479	NM_001139478	CD14	CD14 molecule
B01	Gga.723	NM_205311	CD28	CD28 molecule
B02	Gga.173	NM_204649	CD4	CD4 molecule
B03	Gga.197	NM_204665	CD40	CD40 molecule, TNF receptor superfamily member 5
B04	Gga.3027	NM_204733	CD40LG	CD40 ligand (TNF superfamily, member 5, hyper-IgM syndrome)
B05	Gga.22815	NM_001079739	CD80	CD80 molecule
B06	Gga.32582	NM_001037839	CD86	CD86 molecule
B07	Gga.575	NM_205235	CD8A	CD8a molecule
B08	Gga.33713	NM_001039564	CRP	C-reactive protein, pentraxin-related
B09	Gga.47564	NM_001007078	CSF2	Granulocyte-macrophage colony-stimulating factor
B10	Gga.9513	NM_204510	CXCL12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
B11	Gga.2305	NM_204617	CXCR4	Chemokine (C-X-C motif) receptor 4
B12	Gga.100	NM_001199487	FAS	Fas (TNF receptor superfamily, member 6)
C01	Gga.29896	NM_001031559	FASLG	Fas ligand (TNF superfamily, member 6)
C02	Gga.744	NM_001008444	GATA3	GATA binding protein 3
C03	Gga.16457	NM_001193638	IFIH1	Interferon induced with helicase C domain 1
C04	Gga.801	NM_205427	IFNA3	Interferon
C05	Gga.4185	NM_204859	IFNAR1	Interferon (alpha, beta and omega) receptor 1
C06	Gga.22865	NM_001024836	IFNB	Interferon beta
C07	Gga.47882	NM_205149	IFNG	Interferon, gamma
C08	Gga.47585	NM_001130387	IFNGR1	Interferon gamma receptor 1
C09	Gga.46641	NM_001004414	IL10	Interleukin 10
C10	Gga.22885	NM_001007085	IL13	Interleukin 13
C11	Gga.42186	NM_204571	IL15	Interleukin 15
C12	Gga.42408	NM_204608	IL18	Interleukin 18 (interferon-gamma-inducing factor)
D01	Gga.19	NM_204524	IL1B	Interleukin 1, beta
D02	Gga.846	NM_205485	IL1R1	Interleukin 1 receptor, type I
D03	Gga.4946	NM_204153	IL2	Interleukin 2
D04	Gga.47945	NM_001007079	IL4	Interleukin 4
D05	Gga.22886	NM_001007084	IL5	Interleukin 5
D06	Gga.2769	NM_204628	IL6	Interleukin 6 (interferon, beta 2)
D07	Gga.512	NM_205018	IL8	Interleukin 8

Position	UniGene	GenBank	Symbol	Description
D08	Gga.22347	NM_001030738	IRAK4	Interleukin-1 receptor-associated kinase 4
D09	Gga.791	NM_205415	IRF1	Interferon regulatory factor 1
D10	Gga.7980	XM_417990	IRF6	Interferon regulatory factor 6
D11	Gga.1087	NM_205372	IRF7	Interferon regulatory factor 7
D12	Gga.4507	NM_205251	ITGB2	Integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)
E01	Gga.954	NM_001030538	JAK2	Janus kinase 2 (a protein tyrosine kinase)
E02	Gga.1473	NM_001031289	JUN	Jun proto-oncogene
E03	Gga.3383	NM_204267	LITAF	Lipopolysaccharide-induced TNF factor
E04	N/A	XM_003641945	LOC100859040	Interleukin-17C-like
E05	N/A	XM_003643566	LOC100859196	Signal transducer and transcription activator 6-like
E06	N/A	XM_427671	LOC430113	Similar to MGC83617 protein
E07	Gga.47699	NM_205304	LTF	Lactotransferrin
E08	Gga.5743	XM_001232092	LY96	Lymphocyte antigen 96
E09	Gga.713	NM_205281	LYZ	Lysozyme (renal amyloidosis)
E10	Gga.2163	NM_204150	MAPK1	Mitogen-activated protein kinase 1
E11	Gga.22642	XM_001232615	MAPK14	Mitogen-activated protein kinase 14
E12	Gga.1147	XM_001233168	MAPK8	Mitogen-activated protein kinase 8
F01	Gga.174	NM_204349	MBL2	Mannose-binding lectin (protein C) 2, soluble
F02	Gga.23215	XM_415716	MPO	Myeloperoxidase
F03	Gga.131	NM_204609	MX1	Myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
F04	Gga.17397	NM_001030962	MYD88	Myeloid differentiation primary response gene (88)
F05	Gga.4408	NM_205134	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F06	Gga.41891	NM_001001472	NFKBIA	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
F07	Gga.22808	XM_001233261	NLRP3	NLR family, pyrin domain containing 3
F08	Gga.40185	XM_418777	NOD1	Nucleotide-binding oligomerization domain containing 1
F09	Gga.4401	NM_001167718	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F10	Gga.32111	NM_001031188	RAG1	Recombination activating gene 1
F11	Gga.477	NM_204964	SLC11A1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
F12	Gga.41913	NM_001012914	STAT1	Signal transducer and activator of transcription 1, 91kDa
G01	Gga.32114	NM_001030931	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G02	Gga.39077	XM_001231298	STAT4	Signal transducer and activator of transcription 4
G03	Gga.12009	NM_001081506	TICAM1	Toll-like receptor adaptor molecule 1
G04	Gga.26502	NM_001037835	TLR15	Toll-like receptor 15
G05	Gga.22171	NM_001030558	TLR21	Toll-like receptor 21
G06	Gga.46177	NM_001161650	TLR2-2	Toll-like receptor 2
G07	Gga.22930	NM_001011691	TLR3	Toll-like receptor 3
G08	Gga.32116	NM_001030693	TLR4	Toll-like receptor 4
G09	Gga.3252	NM_001024586	TLR5	Toll-like receptor 5
G10	Gga.22623	NM_001007488	TLR6	Toll-like receptor 6
G11	Gga.22176	NM_001011688	TLR7	Toll-like receptor 7
G12	Gga.31230	XM_421089	TRAF6	TNF receptor-associated factor 6
H01	Gga.6076	NM_205518	ACTB	Actin, beta
H02	Gga.44427	XM_425746	H6PD	Hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)
H03	Gga.8480	XM_417846	HMBS	Hydroxymethylbilane synthase
H04	Gga.4523	NM_001007479	RPL4	Ribosomal protein L4
H05	Gga.39142	XM_001234599	UBC	Ubiquitin C
H06	N/A	SA_00517	GGDC	Chicken Genomic DNA Contamination
H07	N/A	SA_00104	RTC	Reverse Transcription Control
H08	N/A	SA_00104	RTC	Reverse Transcription Control
H09	N/A	SA_00104	RTC	Reverse Transcription Control
H10	N/A	SA_00103	PPC	Positive PCR Control
H11	N/A	SA_00103	PPC	Positive PCR Control
H12	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 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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