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

Human Allergy & Asthma

Cat. no. 330231 PAHS-067ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human Allergy & Asthma RT² Profiler PCR Array profiles the expression of 84 key genes central to allergic responses. CD4+ T cells differentiate into multiple subtypes during immune responses. An overrepresentation of the T helper 2 (Th2) cell subtype and the IgE antibody isotype commonly characterizes allergic inflammation, and both the cell and the molecule play central roles in allergic disease mechanisms. Additional cell types also mediate the Th2 and IgE-driven allergic response, including eosinophils, mast cells, natural killer (NK) cells, and alternatively-activated macrophages. Once activated, these cells release cytokines and chemokines, promoting inflammation and potentially tissue remodeling. Many allergy researchers focus on the interaction, activation and dysregulation of these different cell types. Common allergic diseases include atopic dermatitis and food allergies. Allergy is also a major cause of asthma, leading to airway hyperresponsiveness (AHR) and chronic inflammation. This array includes cytokines and other genes important for the activation and the cellular responses of Th2 cells, mast cells, eosinophils, NK cells, and alternatively-activated macrophages, as well as genes specific for allergic asthma. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes involved in allergic diseases 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	ADAM33	ADRB2	ALOX5	AREG	ARG1	BCL6	CCL11	CCL17	CCL2	CCL22	CCL24	CCL26
B	CCL5	CCL8	CCR3	CCR4	CCR8	CD40LG	CHI3L1	CHIA	CLC	CLCA1	CMA1	CPA3
C	CRLF2	CSF2	CSF3R	CYSLTR1	EPX	FCER1A	FOXP3	GATA3	PTGDR2	ICOS	IFNG	IFNGR2
D	IL10	IL12A	IL12B	IL13	IL13RA1	IL13RA2	IL17A	IL17RB	IL18	IL1RL1	IL21	IL25
E	IL2RA	IL3	IL31	IL33	IL3RA	IL4	IL4R	IL5	IL5RA	IL9	KIT	KITLG
F	LTB4R	MAF	MMP9	MRC1	MS4A2	PDCD1	PMCH	POSTN	PPARG	PRG2	RETNLB	RNASE2
G	RNASE3	RORC	SATB1	SIGLEC8	STAT5A	STAT6	TBX21	TGFB1	TNFRSF4	TNFSF4	TPSAB1	TSLP
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.173716	NM_025220	ADAM33	ADAM metallopeptidase domain 33
A02	Hs.591251	NM_000024	ADRB2	Adrenergic, beta-2-, receptor, surface
A03	Hs.89499	NM_000698	ALOX5	Arachidonate 5-lipoxygenase
A04	Hs.270833	NM_001657	AREG	Amphiregulin
A05	Hs.440934	NM_000045	ARG1	Arginase, liver
A06	Hs.478588	NM_001706	BCL6	B-cell CLL/lymphoma 6
A07	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
A08	Hs.546294	NM_002987	CCL17	Chemokine (C-C motif) ligand 17
A09	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A10	Hs.534347	NM_002990	CCL22	Chemokine (C-C motif) ligand 22
A11	Hs.247838	NM_002991	CCL24	Chemokine (C-C motif) ligand 24
A12	Hs.131342	NM_006072	CCL26	Chemokine (C-C motif) ligand 26
B01	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
B02	Hs.271387	NM_005623	CCL8	Chemokine (C-C motif) ligand 8
B03	Hs.506190	NM_001837	CCR3	Chemokine (C-C motif) receptor 3
B04	Hs.184926	NM_005508	CCR4	Chemokine (C-C motif) receptor 4
B05	Hs.113222	NM_005201	CCR8	Chemokine (C-C motif) receptor 8
B06	Hs.592244	NM_000074	CD40LG	CD40 ligand
B07	Hs.382202	NM_001276	CHI3L1	Chitinase 3-like 1 (cartilage glycoprotein-39)
B08	Hs.128814	NM_201653	CHIA	Chitinase, acidic
B09	Hs.889	NM_001828	CLC	Charcot-Leyden crystal protein
B10	Hs.194659	NM_001285	CLCA1	Chloride channel accessory 1
B11	Hs.135626	NM_001836	CMA1	Chymase 1, mast cell
B12	Hs.646	NM_001870	CPA3	Carboxypeptidase A3 (mast cell)
C01	Hs.287729	NM_001012288	CRLF2	Cytokine receptor-like factor 2
C02	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
C03	Hs.524517	NM_000760	CSF3R	Colony stimulating factor 3 receptor (granulocyte)
C04	Hs.201300	NM_006639	CYSLTR1	Cysteinyl leukotriene receptor 1
C05	Hs.279259	NM_000502	EPX	Eosinophil peroxidase
C06	Hs.897	NM_002001	FCER1A	Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide
C07	Hs.247700	NM_014009	FOXP3	Forkhead box P3
C08	Hs.524134	NM_002051	GATA3	GATA binding protein 3
C09	Hs.299567	NM_004778	PTGDR2	Prostaglandin D2 receptor 2
C10	Hs.56247	NM_012092	ICOS	Inducible T-cell co-stimulator
C11	Hs.856	NM_000619	IFNG	Interferon, gamma
C12	Hs.634632	NM_005534	IFNGR2	Interferon gamma receptor 2 (interferon gamma transducer 1)
D01	Hs.193717	NM_000572	IL10	Interleukin 10
D02	Hs.673	NM_000882	IL12A	Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)
D03	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
D04	Hs.845	NM_002188	IL13	Interleukin 13
D05	Hs.496646	NM_001560	IL13RA1	Interleukin 13 receptor, alpha 1
D06	Hs.336046	NM_000640	IL13RA2	Interleukin 13 receptor, alpha 2
D07	Hs.41724	NM_002190	IL17A	Interleukin 17A

Position	UniGene	GenBank	Symbol	Description
D08	Hs.654970	NM_018725	IL17RB	Interleukin 17 receptor B
D09	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
D10	Hs.66	NM_016232	IL1RL1	Interleukin 1 receptor-like 1
D11	Hs.567559	NM_021803	IL21	Interleukin 21
D12	Hs.302036	NM_022789	IL25	Interleukin 25
E01	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
E02	Hs.694	NM_000588	IL3	Interleukin 3 (colony-stimulating factor, multiple)
E03	Hs.569071	NM_001014336	IL31	Interleukin 31
E04	Hs.348390	NM_033439	IL33	Interleukin 33
E05	Hs.632790	NM_002183	IL3RA	Interleukin 3 receptor, alpha (low affinity)
E06	Hs.73917	NM_000589	IL4	Interleukin 4
E07	Hs.513457	NM_000418	IL4R	Interleukin 4 receptor
E08	Hs.2247	NM_000879	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
E09	Hs.68876	NM_000564	IL5RA	Interleukin 5 receptor, alpha
E10	Hs.960	NM_000590	IL9	Interleukin 9
E11	Hs.479754	NM_000222	KIT	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
E12	Hs.1048	NM_003994	KITLG	KIT ligand
F01	Hs.655431	NM_181657	LTB4R	Leukotriene B4 receptor
F02	Hs.134859	NM_005360	MAF	V-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)
F03	Hs.297413	NM_004994	MMP9	Matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F04	Hs.75182	NM_002438	MRC1	Mannose receptor, C type 1
F05	Hs.386748	NM_000139	MS4A2	Membrane-spanning 4-domains, subfamily A, member 2 (Fc fragment of IgE, high affinity I, receptor for; beta polypeptide)
F06	Hs.158297	NM_005018	PDCD1	Programmed cell death 1
F07	Hs.707990	NM_002674	PMCH	Pro-melanin-concentrating hormone
F08	Hs.136348	NM_006475	POSTN	Periostin, osteoblast specific factor
F09	Hs.162646	NM_015869	PPARG	Peroxisome proliferator-activated receptor gamma
F10	Hs.512633	NM_002728	PRG2	Proteoglycan 2, bone marrow (natural killer cell activator, eosinophil granule major basic protein)
F11	Hs.307047	NM_032579	RETNLB	Resistin like beta
F12	Hs.728	NM_002934	RNASE2	Ribonuclease, RNase A family, 2 (liver, eosinophil-derived neurotoxin)
G01	Hs.73839	NM_002935	RNASE3	Ribonuclease, RNase A family, 3
G02	Hs.256022	NM_005060	RORC	RAR-related orphan receptor C
G03	Hs.517717	NM_002971	SATB1	SATB homeobox 1
G04	Hs.447899	NM_014442	SIGLEC8	Sialic acid binding Ig-like lectin 8
G05	Hs.437058	NM_003152	STAT5A	Signal transducer and activator of transcription 5A
G06	Hs.524518	NM_003153	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
G07	Hs.272409	NM_013351	TBX21	T-box 21
G08	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
G09	Hs.129780	NM_003327	TNFRSF4	Tumor necrosis factor receptor superfamily, member 4
G10	Hs.181097	NM_003326	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G11	Hs.405479	NM_003294	TPSAB1	Tryptase alpha/beta 1
G12	Hs.389874	NM_033035	TSLP	Thymic stromal lymphopoietin
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² 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
RT² 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
RT² 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.

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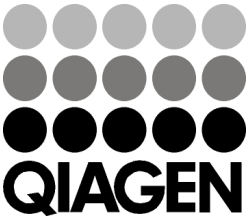

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