RT² Profiler PCR Array (Rotor-Gene® Format)

Human Th1 & Th2 Responses

Cat. no. 330231 PAHS-034ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Human Th1 & Th2 Responses RT² Profiler PCR Array profiles the expression of 84 genes involved in T helper cell (Th cell) immune responses. Adaptive immunity involves activation of T cells and B cells, lymphocytes that initiate a tailored immune response to a specific pathogen. Th cells cannot destroy pathogens alone, but instead communicate with B cells to mediate appropriate immune responses. The 2 well-known and characterized Th cell subtypes, Th1 and Th2 cells, have specific immune functions and are identified by their secreted cytokines and specific receptors. Th1 cells promote cell-mediated immunity, and secrete cytokines such as IFNG. Th2 cells promote humoral immunity and produce immunogenic factors such as IL13 and IgE. Unnecessary immune responses caused by the activation of the inappropriate Th subtype can contribute to asthma, allergies, and some autoimmune diseases. Analyzing T cell gene expression and regulation can distinguish the relative roles and importance of both subtypes to an experimental model system. This array includes markers for Th1 and Th2 cells as well as genes involved in Th1 and Th2 function and immune responses. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes important for Th1 and Th2 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 cycler (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
A01	Hs.478588	NM_001706	BCL6	B-cell CLL/lymphoma 6
A02	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
A03	Hs.514821	NM_002985	CCL5	Chemokine (C-C motif) ligand 5
A04	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
A05	Hs.511794	NM_001123396	CCR2	Chemokine (C-C motif) receptor 2
A06	Hs.506190	NM_001837	CCR3	Chemokine (C-C motif) receptor 3
A07	Hs.184926	NM_005508	CCR4	Chemokine (C-C motif) receptor 4
A08	Hs.450802	NM_000579	CCR5	Chemokine (C-C motif) receptor 5
A09	Hs.355307	NM_001242	CD27	CD27 molecule
A10	Hs.591629	NM_006139	CD28	CD28 molecule
A11	Hs.631659	NM_000616	CD4	CD4 molecule
A12	Hs.592244	NM_000074	CD40LG	CD40 ligand
B01	Hs.838	NM_005191	CD80	CD80 molecule
B02	Hs.171182	NM_006889	CD86	CD86 molecule
B03	Hs.517106	NM_005194	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
B04	Hs.459759	NM_004380	CREBBP	CREB binding protein
B05	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B06	Hs.247824	NM_005214	CTLA4	Cytotoxic T-lymphocyte-associated protein 4
B07	Hs.198252	NM_001504	CXCR3	Chemokine (C-X-C motif) receptor 3
B08	Hs.501452	NM_005755	EBI3	Epstein-Barr virus induced 3
B09	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
B10	Hs.524134	NM_002051	GATA3	GATA binding protein 3
B11	Hs.73172	NM_005263	GFI1	Growth factor independent 1 transcription repressor
B12	Hs.299567	NM_004778	PTGDR2	Prostaglandin D2 receptor 2
C01	Hs.710500	NM_032782	HAVCR2	Hepatitis A virus cellular receptor 2
C02	Hs.56247	NM_012092	ICOS	Inducible T-cell co-stimulator
C03	Hs.856	NM_000619	IFNG	Interferon, gamma
C04	Hs.193717	NM_000572	IL10	Interleukin 10
C05	Hs.674	NM_002187	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
C06	Hs.479347	NM_001559	IL12RB2	Interleukin 12 receptor, beta 2
C07	Hs.845	NM_002188	IL13	Interleukin 13
C08	Hs.496646	NM_001560	IL13RA1	Interleukin 13 receptor, alpha 1
C09	Hs.654378	NM_000585	IL15	Interleukin 15
C10	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
C11	Hs.469521	NM_003855	IL18R1	Interleukin 18 receptor 1
C12	Hs.701982	NM_000877	IL1R1	Interleukin 1 receptor, type I
D01	Hs.66	NM_016232	IL1RL1	Interleukin 1 receptor-like 1
D02	Hs.89679	NM_000586	IL2	Interleukin 2
D03	Hs.411311	NM_006850	IL24	Interleukin 24
D04	Hs.302036	NM_022789	IL25	Interleukin 25
D05	Hs.528111	NM_145659	IL27	Interleukin 27
D06	Hs.132781	NM_004843	IL27RA	Interleukin 27 receptor, alpha
D07	Hs.231367	NM_000417	IL2RA	Interleukin 2 receptor, alpha
D08	Hs.694	NM_000588	IL3	Interleukin 3 (colony-stimulating factor, multiple)
D09	Hs.73917	NM_000589	IL4	Interleukin 4
D10	Hs.513457	NM_000418	IL4R	Interleukin 4 receptor
D11	Hs.2247	NM_000879	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
D12	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
E01	Hs.709210	NM_000565	IL6R	Interleukin 6 receptor
E02	Hs.591873	NM_000880	IL7	Interleukin 7
E03	Hs.591742	NM_002185	IL7R	Interleukin 7 receptor
E04	Hs.960	NM_000590	IL9	Interleukin 9
E05	Hs.436061	NM_002198	IRF1	Interferon regulatory factor 1
E06	Hs.401013	NM_002460	IRF4	Interferon regulatory factor 4
E07	Hs.207538	NM_002227	JAK1	Janus kinase 1
E08	Hs.656213	NM_004972	JAK2	Janus kinase 2

Position	UniGene	GenBank	Symbol	Description
E09	Hs.409523	NM_002286	LAG3	Lymphocyte-activation gene 3
E10	Hs.632179	NM_014387	LAT	Linker for activation of T cells
E11	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
E12	Hs.134859	NM_005360	MAF	V-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)
F01	Hs.138211	NM_002750	MAPK8	Mitogen-activated protein kinase 8
F02	Hs.534074	NM_172390	NFATC1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1
F03	Hs.713650	NM_012340	NFATC2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
F04	Hs.371617	NM_007144	PCGF2	Polycomb group ring finger 2
F05	Hs.654514	NM_002838	PTPRC	Protein tyrosine phosphatase, receptor type, C
F06	Hs.253495	NM_003019	SFTPD	Surfactant protein D
F07	Hs.591607	NM_000578	SLC11A1	Solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
F08	Hs.50640	NM_003745	SOCS1	Suppressor of cytokine signaling 1
F09	Hs.468426	NM_144949	SOCS5	Suppressor of cytokine signaling 5
F10	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1
F11	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
F12	Hs.80642	NM_003151	STAT4	Signal transducer and activator of transcription 4
G01	Hs.524518	NM_003153	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
G02	Hs.272409	NM_013351	TBX21	T-box 21
G03	Hs.592317	NM_003239	TGFB3	Transforming growth factor, beta 3
G04	Hs.174312	NM_138554	TLR4	Toll-like receptor 4
G05	Hs.662185	NM_006068	TLR6	Toll-like receptor 6
G06	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G07	Hs.1314	NM_001243	TNFRSF8	Tumor necrosis factor receptor superfamily, member 8
G08	Hs.654459	NM_001561	TNFRSF9	Tumor necrosis factor receptor superfamily, member 9
G09	Hs.181097	NM_003326	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G10	Hs.75516	NM_003331	TYK2	Tyrosine kinase 2
G11	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G12	Hs.388927	NM_003403	YY1	YY1 transcription factor
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 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

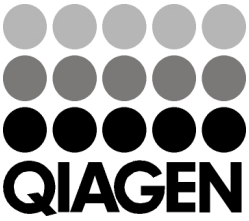
* Larger kit sizes available; please inquire.

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.

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.

www.qiagen.com

Australia ▪ 1-800-243-800
Austria ▪ 0800/281010
Belgium ▪ 0800-79612
Brazil ▪ 0800-557779
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



Sample & Assay Technologies