RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse T Helper Cell Differentiation

Cat. no. 330231 PAMM-503ZR

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 Mouse T Helper Cell Differentiation RT² Profiler PCR Array profiles the expression of 84 key genes regulating the commitment of precursor T cells to differentiate into specific effector subtypes. The two more well-known and characterized T helper cell subtypes, Th1 and Th2 cells, mediate cellular and humoral immune responses. Many published research studies find that one subtype population and its immune response tends to dominate in immune disorders such as allergy, asthma, autoimmunity, diabetes, hypersensitivity, and rheumatoid arthritis. The genes represented by this array include cytokines, cytokine receptors, transcription factors, and other signaling molecules regulating differentiation into Th1 or Th2 cells as well as specific markers for these subtypes. Profiling your research RNA samples from T cell population sources will help you correlate sub-type specific gene expression with experimentally-induced cellular or humoral immune responses. The results of this array can also help you provide insights into the molecular mechanisms and biological pathways behind T helper cell lineage commitment decisions in your model system. Using real-time PCR, your research study can easily and reliably analyze the expression of a focused panel of genes involved in T helper cell differentiation 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	Mm.27159	NM_023049	Asb2	Ankyrin repeat and SOCS box-containing 2
A02	Mm.289647	NM_019582	Cacna1f	Calcium channel, voltage-dependent, alpha 1F subunit
A03	Mm.4686	NM_011330	Ccl11	Chemokine (C-C motif) ligand 11
A04	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
A05	Mm.341574	NM_013654	Ccl7	Chemokine (C-C motif) ligand 7
A06	Mm.57050	NM_009914	Ccr3	Chemokine (C-C motif) receptor 3
A07	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
A08	Mm.8007	NM_009835	Ccr6	Chemokine (C-C motif) receptor 6
A09	Mm.439656	NM_009883	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
A10	Mm.138792	NM_001081417	Chd7	Chromodomain helicase DNA binding protein 7
A11	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
A12	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
B01	Mm.6215	NM_010235	Fosl1	Fos-like antigen 1
B02	Mm.182291	NM_054039	Foxp3	Forkhead box P3
B03	Mm.313866	NM_008091	Gata3	GATA binding protein 3
B04	Mm.247669	NM_008092	Gata4	GATA binding protein 4
B05	Mm.2078	NM_010278	Gfi1	Growth factor independent 1
B06	Mm.470721	NM_009962	Gpr44	G protein-coupled receptor 44
B07	Mm.72168	NM_134250	Havcr2	Hepatitis A virus cellular receptor 2
B08	Mm.181852	NM_175606	Hopx	HOP homeobox
B09	Mm.5	NM_008263	Hoxa10	Homeobox A10
B10	Mm.159945	NM_010452	Hoxa3	Homeobox A3
B11	Mm.42044	NM_017480	Icos	Inducible T-cell co-stimulator
B12	Mm.34871	NM_010496	Id2	Inhibitor of DNA binding 2
C01	Mm.240327	NM_008337	Ifng	Interferon gamma
C02	Mm.160384	NM_030691	Igsf6	Immunoglobulin superfamily, member 6
C03	Mm.106343	NM_011770	Ikzf2	IKAROS family zinc finger 2
C04	Mm.239707	NM_008352	Il12b	Interleukin 12B
C05	Mm.188337	NM_008354	Il12rb2	Interleukin 12 receptor, beta 2
C06	Mm.1284	NM_008355	Il13	Interleukin 13
C07	Mm.24208	NM_133990	Il13ra1	Interleukin 13 receptor, alpha 1
C08	Mm.5419	NM_010552	Il17a	Interleukin 17A
C09	Mm.131781	NM_145826	Il17re	Interleukin 17 receptor E
C10	Mm.1410	NM_008360	Il18	Interleukin 18
C11	Mm.253664	NM_008365	Il18r1	Interleukin 18 receptor 1
C12	Mm.20466	NM_010553	Il18rap	Interleukin 18 receptor accessory protein
D01	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type I
D02	Mm.1349	NM_010555	Il1r2	Interleukin 1 receptor, type II
D03	Mm.289824	NM_010743	Il1rl1	Interleukin 1 receptor-like 1
D04	Mm.14190	NM_008366	Il2	Interleukin 2
D05	Mm.157689	NM_021782	Il21	Interleukin 21
D06	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
D07	Mm.276360	NM_021283	Il4	Interleukin 4
D08	Mm.233802	NM_001008700	Il4ra	Interleukin 4 receptor, alpha
D09	Mm.4461	NM_010558	Il5	Interleukin 5
D10	Mm.3006	NM_008373	Il9	Interleukin 9
D11	Mm.105218	NM_008390	Irf1	Interferon regulatory factor 1
D12	Mm.4677	NM_013674	Irf4	Interferon regulatory factor 4
E01	Mm.334861	NM_008320	Irf8	Interferon regulatory factor 8
E02	Mm.289657	NM_146145	Jak1	Janus kinase 1
E03	Mm.323057	NM_001113379	Lrrc32	Leucine rich repeat containing 32
E04	Mm.275549	NM_001025577	Maf	Avian musculoaponeurotic fibrosarcoma (v-maf) AS42 oncogene homolog
E05	Mm.52109	NM_010848	Myb	Myeloblastosis oncogene
E06	Mm.329560	NM_016791	Nfatc1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1
E07	Mm.116802	NM_010899	Nfatc2	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2
E08	Mm.1389	NM_010900	Nfatc2ip	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacting protein

Position	UniGene	GenBank	Symbol	Description
E09	Mm.119	NM_010444	Nr4a1	Nuclear receptor subfamily 4, group A, member 1
E10	Mm.247261	NM_015743	Nr4a3	Nuclear receptor subfamily 4, group A, member 3
E11	Mm.28209	NM_022032	Perp	PERP, TP53 apoptosis effector
E12	Mm.6442	NM_008861	Pkd2	Polycystic kidney disease 2
F01	Mm.76683	NM_011138	Pou2f2	POU domain, class 2, transcription factor 2
F02	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
F03	Mm.4869	NM_009044	Rel	Reticuloendotheliosis oncogene
F04	Mm.378450	NM_013646	Rora	RAR-related orphan receptor alpha
F05	Mm.4372	NM_011281	Rorc	RAR-related orphan receptor gamma
F06	Mm.4081	NM_009821	Runx1	Runt related transcription factor 1
F07	Mm.378894	NM_019732	Runx3	Runt related transcription factor 3
F08	Mm.130	NM_009896	Socs1	Suppressor of cytokine signaling 1
F09	Mm.126885	NM_019654	Socs5	Suppressor of cytokine signaling 5
F10	Mm.277406	NM_009283	Stat1	Signal transducer and activator of transcription 1
F11	Mm.1550	NM_011487	Stat4	Signal transducer and activator of transcription 4
F12	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
G01	Mm.477879	NM_019507	Tbx21	T-box 21
G02	Mm.101034	NM_009372	Tgif1	TGFB-induced factor homeobox 1
G03	Mm.38049	NM_021297	Tlr4	Toll-like receptor 4
G04	Mm.42146	NM_011604	Tlr6	Toll-like receptor 6
G05	Mm.196618	NM_010744	Tmed1	Transmembrane emp24 domain containing 1
G06	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G07	Mm.244187	NM_011612	Tnfrsf9	Tumor necrosis factor receptor superfamily, member 9
G08	Mm.249221	NM_011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Mm.393018	NM_021897	Trp53inp1	Transformation related protein 53 inducible nuclear protein 1
G10	Mm.89984	NM_011910	Uts2	Urotensin 2
G11	Mm.262184	NM_009565	Zbtb7b	Zinc finger and BTB domain containing 7B
G12	Mm.3929	NM_011546	Zeb1	Zinc finger E-box binding homeobox 1
H01	Mm.328431	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mm.3317	NM_010368	Gusb	Glucuronidase, beta
H05	Mm.2180	NM_008302	Hsp90ab1	Heat shock protein 90 alpha (cytosolic), class B member 1
H06	N/A	SA_00106	MGDC	Mouse 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.

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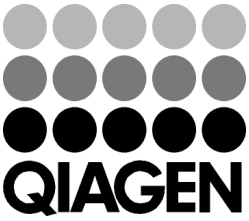

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