

RT² Profiler PCR Array (Rotor-Gene[®] Format)

Mouse Allergy & Asthma

Cat. no. 330231 PAMM-067ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Mouse 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 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.



Sample & Assay Technologies

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.108550	NM_033615	Adam33	A disintegrin and metallopeptidase domain 33
A02	Mm.5598	NM_007420	Adrb2	Adrenergic receptor, beta 2
A03	Mm.41072	NM_009662	Alox5	Arachidonate 5-lipoxygenase
A04	Mm.8039	NM_009704	Areg	Amphiregulin
A05	Mm.154144	NM_007482	Arg1	Arginase, liver
A06	Mm.347398	NM_009744	Bcl6	B-cell leukemia/lymphoma 6
A07	Mm.4686	NM_011330	Ccl11	Chemokine (C-C motif) ligand 11
A08	Mm.867	NM_011331	Ccl12	Chemokine (C-C motif) ligand 12
A09	Mm.41988	NM_011332	Ccl17	Chemokine (C-C motif) ligand 17
A10	Mm.12895	NM_009137	Ccl22	Chemokine (C-C motif) ligand 22
A11	Mm.31505	NM_019577	Ccl24	Chemokine (C-C motif) ligand 24
A12	Mm.376459	NM_001013412	Ccl26	Chemokine (C-C motif) ligand 26
B01	Mm.244263	NM_013652	Ccl4	Chemokine (C-C motif) ligand 4
B02	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
B03	Mm.57050	NM_009914	Ccr3	Chemokine (C-C motif) receptor 3
B04	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
B05	Mm.442098	NM_007720	Ccr8	Chemokine (C-C motif) receptor 8
B06	Mm.4861	NM_011616	Cd40lg	CD40 ligand
B07	Mm.38274	NM_007695	Chi3l1	Chitinase 3-like 1
B08	Mm.46418	NM_023186	Chia	Chitinase, acidic
B09	Mm.33483	NM_017474	Clca3	Chloride channel calcium activated 3
B10	Mm.1252	NM_010780	Cma1	Chymase 1, mast cell
B11	Mm.1135	NM_007753	Cpa3	Carboxypeptidase A3, mast cell
B12	Mm.35771	NM_016715	Crlf2	Cytokine receptor-like factor 2
C01	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
C02	Mm.271701	NM_007782	Csf3r	Colony stimulating factor 3 receptor (granulocyte)
C03	Mm.287166	NM_021476	Cysl1r1	Cysteinyl leukotriene receptor 1
C04	Mm.153688	NM_053113	Ear11	Eosinophil-associated, ribonuclease A family, member 11
C05	Mm.377125	NM_019398	Ear5	Eosinophil-associated, ribonuclease A family, member 5
C06	Mm.1315	NM_007946	Epx	Eosinophil peroxidase
C07	Mm.292415	NM_011808	Ets1	E26 avian leukemia oncogene 1, 5' domain
C08	Mm.5266	NM_010184	Fcer1a	Fc receptor, IgE, high affinity 1, alpha polypeptide
C09	Mm.182291	NM_054039	Foxp3	Forkhead box P3
C10	Mm.313866	NM_008091	Gata3	GATA binding protein 3
C11	Mm.470721	NM_009962	Gpr44	G protein-coupled receptor 44
C12	Mm.42044	NM_017480	Icos	Inducible T-cell co-stimulator
D01	Mm.240327	NM_008337	Ifnrg	Interferon gamma
D02	Mm.249364	NM_008338	Ifngr2	Interferon gamma receptor 2
D03	Mm.874	NM_010548	Il10	Interleukin 10
D04	Mm.103783	NM_008351	Il12a	Interleukin 12A
D05	Mm.239707	NM_008352	Il12b	Interleukin 12B
D06	Mm.1284	NM_008355	Il13	Interleukin 13
D07	Mm.24208	NM_133990	Il13ra1	Interleukin 13 receptor, alpha 1
D08	Mm.368330	NM_008356	Il13ra2	Interleukin 13 receptor, alpha 2
D09	Mm.5419	NM_010552	Il17a	Interleukin 17A
D10	Mm.269363	NM_019583	Il17rb	Interleukin 17 receptor B
D11	Mm.1410	NM_008360	Il18	Interleukin 18
D12	Mm.289824	NM_010743	Il1rl1	Interleukin 1 receptor-like 1
E01	Mm.157689	NM_021782	Il21	Interleukin 21
E02	Mm.90154	NM_080729	Il25	Interleukin 25
E03	Mm.915	NM_008367	Il2ra	Interleukin 2 receptor, alpha chain
E04	Mm.983	NM_010556	Il3	Interleukin 3
E05	Mm.182359	NM_133775	Il33	Interleukin 33
E06	Mm.425857	NM_008369	Il3ra	Interleukin 3 receptor, alpha chain
E07	Mm.276360	NM_021283	Il4	Interleukin 4
E08	Mm.233802	NM_001008700	Il4ra	Interleukin 4 receptor, alpha
E09	Mm.4461	NM_010558	Il5	Interleukin 5

Position	UniGene	GenBank	Symbol	Description
E10	Mm.3448	NM_008370	Il5ra	Interleukin 5 receptor, alpha
E11	Mm.3006	NM_008373	Il9	Interleukin 9
E12	Mm.31903	NM_010576	Itga4	Integrin alpha 4
F01	Mm.247073	NM_021099	Kit	Kit oncogene
F02	Mm.45124	NM_013598	Kitl	Kit ligand
F03	Mm.20853	NM_008519	Ltb4r1	Leukotriene B4 receptor 1
F04	Mm.275549	NM_001025577	Maf	Avian musculoaponeurotic fibrosarcoma (v-maf) AS42 oncogene homolog
F05	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
F06	Mm.2019	NM_008625	Mrc1	Mannose receptor, C type 1
F07	Mm.329735	NM_013516	Ms4a2	Membrane-spanning 4-domains, subfamily A, member 2
F08	Mm.334332	NM_010844	Muc5ac	Mucin 5, subtypes A and C, tracheobronchial/gastric
F09	Mm.5024	NM_008798	Pdcd1	Programmed cell death 1
F10	Mm.391436	NM_029971	Pmch	Pro-melanin-concentrating hormone
F11	Mm.236067	NM_015784	Postn	Periostin, osteoblast specific factor
F12	Mm.3020	NM_011146	Pparg	Peroxisome proliferator activated receptor gamma
G01	Mm.142727	NM_008920	Prg2	Proteoglycan 2, bone marrow
G02	Mm.231288	NM_181596	Retnlg	Resistin like gamma
G03	Mm.4372	NM_011281	Rorc	RAR-related orphan receptor gamma
G04	Mm.311655	NM_009122	Satb1	Special AT-rich sequence binding protein 1
G05	Mm.277403	NM_011488	Stat5a	Signal transducer and activator of transcription 5A
G06	Mm.121721	NM_009284	Stat6	Signal transducer and activator of transcription 6
G07	Mm.477879	NM_019507	Tbx21	T-box 21
G08	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G09	Mm.13885	NM_011659	Tnfrsf4	Tumor necrosis factor receptor superfamily, member 4
G10	Mm.4994	NM_009452	Tnfsf4	Tumor necrosis factor (ligand) superfamily, member 4
G11	Mm.7409	NM_010781	Tpsb2	Tryptase beta 2
G12	Mm.143716	NM_021367	Tslp	Thymic stromal lymphopoietin
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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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.

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