RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Cancer Inflammation & Immunity Crosstalk

Cat. no. 330231 PAMM-181ZR

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 Cancer Inflammation & Immunity Crosstalk RT² Profiler PCR Array profiles the expression of 84 key genes involved in mediating communication between tumor cells and the cellular mediators of inflammation and immunity. In addition to epithelial and stromal compartments, the tumor microenvironment contains several cell types of the innate and adaptive immune systems including B and T lymphocytes, dendritic cells, and macrophages. In response to tumor-associated antigens presented via MHC Class I molecules, or to abnormal molecular patterns recognized by Toll-like receptors, the immune system eliminates target cells using a variety of effector enzymes and the engagement of pro-apoptotic signals including TRAIL and FAS ligand. If normal homeostasis is not resolved quickly, a state of chronic inflammation can ensue, including locally increased levels of reactive oxygen and nitrogen species that promote genomic instability. Immune cells produce a variety of cytokines that coordinate the inflammatory response, which is fueled by positive feedback loops commonly involving the STAT and NFkB signaling pathways in tumor cells. The resulting upregulation of antiapoptotic and immunosuppressive factors enables transformed cells to proliferate unchecked by the immune system. During cancer progression, the repertoire of chemokines, cytokines, and growth factors that orchestrates normal immune responses can be commandeered to create an immunosuppressive state that facilitates invasion and metastasis. The genes profiled with this array include mediators and effectors of the cross-talk between tumors and the immune system that influences the course of cancer progression. A set of controls present on each array enables data analysis using the Delta-Delta CT method of relative quantification as well as assessment of reverse transcription performance, genomic DNA

contamination, and PCR performance. Using real-time PCR, researchers can easily and reliably analyze the expression of a focused panel of genes involved in cancer inflammation and immune crosstalk with this array.

The RT² Profiler PCR Arrays are intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

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.491219	NM_007722	Ackr3	Chemokine (C-X-C motif) receptor 7
A02	Mm.391503	NM_009645	Aicda	Activation-induced cytidine deaminase
A03	Mm.257460	NM_009741	Bcl2	B-cell leukemia/lymphoma 2
A04	Mm.238213	NM_009743	Bcl2l1	Bcl2-like 1
A05	Mm.290320	NM_011333	Ccl2	Chemokine (C-C motif) ligand 2
A06	Mm.116739	NM_016960	Ccl20	Chemokine (C-C motif) ligand 20
A07	Mm.12895	NM_009137	Ccl22	Chemokine (C-C motif) ligand 22
A08	Mm.143745	NM_020279	Ccl28	Chemokine (C-C motif) ligand 28
A09	Mm.244263	NM_013652	Ccl4	Chemokine (C-C motif) ligand 4
A10	Mm.284248	NM_013653	Ccl5	Chemokine (C-C motif) ligand 5
A11	Mm.274927	NM_009912	Ccr1	Chemokine (C-C motif) receptor 1
A12	Mm.8021	NM_007721	Ccr10	Chemokine (C-C motif) receptor 10
B01	Mm.6272	NM_009915	Ccr2	Chemokine (C-C motif) receptor 2
B02	Mm.1337	NM_009916	Ccr4	Chemokine (C-C motif) receptor 4
B03	Mm.14302	NM_009917	Ccr5	Chemokine (C-C motif) receptor 5
B04	Mm.2932	NM_007719	Ccr7	Chemokine (C-C motif) receptor 7
B05	Mm.442383	NM_009913	Ccr9	Chemokine (C-C motif) receptor 9
B06	Mm.245363	NM_021893	Cd274	CD274 antigen
B07	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
B08	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
B09	Mm.1238	NM_009971	Csf3	Colony stimulating factor 3 (granulocyte)
B10	Mm.390	NM_009843	Ctla4	Cytotoxic T-lymphocyte-associated protein 4
B11	Mm.21013	NM_008176	Cxcl1	Chemokine (C-X-C motif) ligand 1
B12	Mm.877	NM_021274	Cxcl10	Chemokine (C-X-C motif) ligand 10
C01	Mm.131723	NM_019494	Cxcl11	Chemokine (C-X-C motif) ligand 11
C02	Mm.303231	NM_021704	Cxcl12	Chemokine (C-X-C motif) ligand 12
C03	Mm.4979	NM_009140	Cxcl2	Chemokine (C-X-C motif) ligand 2
C04	Mm.4660	NM_009141	Cxcl5	Chemokine (C-X-C motif) ligand 5
C05	Mm.766	NM_008599	Cxcl9	Chemokine (C-X-C motif) ligand 9
C06	Mm.337035	NM_178241	Cxcr1	Chemokine (C-X-C motif) receptor 1
C07	Mm.234466	NM_009909	Cxcr2	Chemokine (C-X-C motif) receptor 2
C08	Mm.12876	NM_009910	Cxcr3	Chemokine (C-X-C motif) receptor 3
C09	Mm.1401	NM_009911	Cxcr4	Chemokine (C-X-C motif) receptor 4
C10	Mm.491799	NM_007551	Cxcr5	Chemokine (C-X-C motif) receptor 5
C11	Mm.252481	NM_010113	Egf	Epidermal growth factor
C12	Mm.420648	NM_007912	Egfr	Epidermal growth factor receptor
D01	Mm.3355	NM_010177	Fasl	Fas ligand (TNF superfamily, member 6)
D02	Mm.288192	NM_054039	Foxp3	Forkhead box P3
D03	Mm.457978	NM_010259	Gbp2b	Guanylate binding protein 1
D04	Mm.15510	NM_010370	Gzma	Granzyme A
D05	Mm.14874	NM_013542	Gzmb	Granzyme B
D06	Mm.439675	NM_010380	H2-D1	Histocompatibility 2, D region locus 1
D07	Mm.466882	NM_001001892	H2-K1	Histocompatibility 2, K1, K region
D08	Mm.446610	NM_010431	Hif1a	Hypoxia inducible factor 1, alpha subunit
D09	Mm.392	NM_008324	Ido1	Indoleamine 2,3-dioxygenase 1
D10	Mm.240327	NM_008337	Ifng	Interferon gamma
D11	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
D12	Mm.874	NM_010548	Il10	Interleukin 10
E01	Mm.103783	NM_008351	Il12a	Interleukin 12A
E02	Mm.239707	NM_008352	Il12b	Interleukin 12B
E03	Mm.1284	NM_008355	Il13	Interleukin 13
E04	Mm.490053	NM_008357	Il15	Interleukin 15
E05	Mm.5419	NM_010552	Il17a	Interleukin 17A
E06	Mm.15534	NM_010554	Il1a	Interleukin 1 alpha
E07	Mm.222830	NM_008361	Il1b	Interleukin 1 beta
E08	Mm.896	NM_008362	Il1r1	Interleukin 1 receptor, type I
E09	Mm.14190	NM_008366	Il2	Interleukin 2

Position	UniGene	GenBank	Symbol	Description
E10	Mm.103585	NM_016971	Il22	Interleukin 22
E11	Mm.125482	NM_031252	Il23a	Interleukin 23, alpha subunit p19
E12	Mm.276360	NM_021283	Il4	Interleukin 4
F01	Mm.4461	NM_010558	Il5	Interleukin 5
F02	Mm.1019	NM_031168	Il6	Interleukin 6
F03	Mm.105218	NM_008390	Irf1	Interferon regulatory factor 1
F04	Mm.45124	NM_013598	Kitl	Kit ligand
F05	Mm.2326	NM_010798	Mif	Macrophage migration inhibitory factor
F06	Mm.2444	NM_010849	Myc	Myelocytomatosis oncogene
F07	Mm.213003	NM_010851	Myd88	Myeloid differentiation primary response gene 88
F08	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
F09	Mm.2893	NM_010927	Nos2	Nitric oxide synthase 2, inducible
F10	Mm.5024	NM_008798	Pdcd1	Programmed cell death 1
F11	Mm.292547	NM_011198	Ptgs2	Prostaglandin-endoperoxide synthase 2
F12	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
G01	Mm.487336	NM_009283	Stat1	Signal transducer and activator of transcription 1
G02	Mm.249934	NM_011486	Stat3	Signal transducer and activator of transcription 3
G03	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G04	Mm.87596	NM_011905	Tlr2	Toll-like receptor 2
G05	Mm.33874	NM_126166	Tlr3	Toll-like receptor 3
G06	Mm.38049	NM_021297	Tlr4	Toll-like receptor 4
G07	Mm.489377	NM_133211	Tlr7	Toll-like receptor 7
G08	Mm.44889	NM_031178	Tlr9	Toll-like receptor 9
G09	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G10	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G11	Mm.222	NM_011640	Trp53	Transformation related protein 53
G12	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
H01	Mm.391967	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.304088	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.

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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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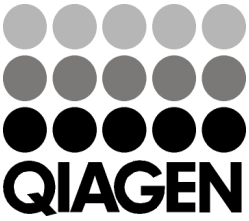

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