

RT² Profiler PCR Array (Rotor-Gene® Format)

Rhesus Macaque Inflammatory Cytokines & Receptors

Cat. no. 330231 PAQQ-011ZR

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 Rhesus Macaque Inflammatory Cytokines & Receptors RT² Profiler PCR Array profiles the expression of 84 key genes mediating the inflammatory response. Acute inflammation occurs in response to cell damage due to infection or injury. During this process, cellular and plasma derived factors encourage extravasation, the recruitment of circulating immune cells into the affected tissue. These immune cells in turn up-regulate the expression of inflammatory cytokines that recruit additional immune cells to mount an immune response to any invading organisms and to further promote and eventually resolve the inflammatory response. Chronic inflammation, or expression of these cytokines and receptors at low levels over long periods of time, promotes various pathological conditions including allergies and asthma, cardiovascular system disorders (atherosclerosis), central nervous system disorders (Alzheimer's disease), fibrosis, and rheumatoid arthritis. This array contains genes involved in mediating immune cascade reactions during inflammation. The chemokines, cytokines, and interleukins involved in the inflammatory response are represented as well as their receptors. Profiling the expression of these inflammatory cytokine and receptor genes helps determine the state of and the mechanisms behind inflammation in your experimental model system. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to inflammation 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 cyclers (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	Mmu.2604	XM_001083775	AIMP1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A02	N/A	XM_001115987	BMP2	Bone morphogenetic protein 2
A03	Mmu.3702	NM_001032849	CCL1	Chemokine (C-C motif) ligand 1
A04	Mmu.3651	NM_001032874	CCL11	Chemokine (C-C motif) ligand 11
A05	Mmu.15592	XM_001113462	CCL13	Chemokine (C-C motif) ligand 13
A06	Mmu.3705	NM_001032852	CCL17	Chemokine (C-C motif) ligand 17
A07	Mmu.3491	NM_001032821	CCL2	Chemokine (C-C motif) ligand 2
A08	Mmu.3708	NM_001032854	CCL20	Chemokine (C-C motif) ligand 20
A09	Mmu.1186	NM_001032946	CCL23	Chemokine (C-C motif) ligand 23
A10	Mmu.3698	NM_001032850	CCL5	Chemokine (C-C motif) ligand 5
A11	Mmu.3419	NM_001032858	CCR1	Chemokine (C-C motif) receptor 1
A12	Mmu.10058	NM_001047140	CCR3	Chemokine (C-C motif) receptor 3
B01	Mmu.14927	XM_001098807	CCR4	Chemokine (C-C motif) receptor 4
B02	Mmu.3681	NM_001032935	CCR6	Chemokine (C-C motif) receptor 6
B03	N/A	XM_001084047	CCR8	Chemokine (C-C motif) receptor 8
B04	Mmu.3581	NM_001032839	CD40LG	CD40 ligand
B05	N/A	XM_001088935	CD70	CD70 antigen-like
B06	N/A	XM_001090841	CSF1	Colony stimulating factor 1 (macrophage)
B07	Mmu.3665	NM_001032949	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B08	Mmu.3716	NM_001032881	CX3CL1	Chemokine (C-X3-C motif) ligand 1
B09	Mmu.13364	XM_001084526	CX3CR1	Chemokine (C-X3-C motif) receptor 1
B10	Mmu.2724	NM_001032950	CXCL11	Chemokine (C-X-C motif) ligand 11
B11	Mmu.3714	NM_001032934	CXCL12	Chemokine (C-X-C motif) ligand 12
B12	Mmu.3684	NM_001032880	CXCL13	Chemokine (C-X-C motif) ligand 13
C01	Mmu.1051	XM_001103136	CXCL6	Chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)
C02	Mmu.3647	NM_001032936	CXCL9	Chemokine (C-X-C motif) ligand 9
C03	Mmu.9522	NM_001040420	CXCR1	Chemokine (C-X-C motif) receptor 1
C04	Mmu.2390	NM_001042645	CXCR4	Chemokine (C-X-C motif) receptor 4
C05	Mmu.3579	NM_001032838	FASLG	Fas ligand (TNF superfamily, member 6)
C06	Mmu.15665	NM_001135794	IFNA2	Interferon, alpha 2
C07	Mmu.3373	NM_001032905	IFNG	Interferon-gamma
C08	Mmu.12155	XM_001092736	IL10RA	Interleukin 10 receptor, alpha
C09	Mmu.2498	XM_001094340	IL10RB	Interleukin-10 receptor subunit beta-like
C10	Mmu.15672	XM_001093448	IL11RA	Interleukin 11 receptor, alpha
C11	Mmu.3413	NM_001044725	IL12B	Interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
C12	Mmu.3505	XM_001115186	IL12RB1	Interleukin 12 receptor, beta 1
D01	Mmu.12301	XM_001094235	IL12RB2	Interleukin 12 receptor, beta 2
D02	Mmu.3675	NM_001032929	IL13	Interleukin 13
D03	Mmu.3414	NM_001044731	IL15	Interleukin 15
D04	Mmu.10866	NM_001079517	IL15RA	Interleukin 15 receptor, alpha
D05	Mmu.2764	NM_001032808	IL16	Interleukin 16
D06	Mmu.14785	XM_001106391	IL17A	Interleukin 17A
D07	N/A	XM_001106517	IL17F	Interleukin-17F-like
D08	Mmu.3361	NM_001042757	IL1A	Interleukin 1, alpha
D09	Mmu.648	NM_001042756	IL1B	Interleukin 1, beta
D10	Mmu.12735	XM_001107510	IL1R1	Interleukin 1 receptor, type I
D11	Mmu.2997	NM_001047134	IL1R2	Interleukin 1 receptor, type II
D12	Mmu.15827	XM_001091717	IL1RN	Interleukin 1 receptor antagonist
E01	Mmu.3415	NM_001047130	IL2	Interleukin 2
E02	Mmu.15063	XM_001084726	IL20	Interleukin 20
E03	Mmu.18852	XM_001103613	IL21	Interleukin 21
E04	Mmu.3810	NM_001032917	IL2RA	Interleukin 2 receptor, alpha
E05	Mmu.12296	XM_001085792	IL2RB	Interleukin 2 receptor, beta
E06	Mmu.1871	NM_001035529	IL2RG	Interleukin 2 receptor, gamma
E07	Mmu.16387	NM_001101734	IL3	Interleukin 3 (colony-stimulating factor, multiple)
E08	Mmu.3375	NM_001032904	IL4	Interleukin 4

Position	UniGene	GenBank	Symbol	Description
E09	Mmu.3362	NM_001047133	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
E10	Mmu.14997	XM_001100843	IL5RA	Interleukin 5 receptor, alpha
E11	Mmu.3376	NM_001042733	IL6	Interleukin 6 (interferon, beta 2)
E12	Mmu.13612	XM_001114404	IL6R	Interleukin 6 receptor
F01	Mmu.3574	NM_001032846	IL7	Interleukin 7
F02	Mmu.3363	NM_001032965	IL8	Interleukin 8
F03	N/A	XM_001088762	IL8RB	Interleukin 8 receptor, beta
F04	Mmu.15228	XM_001100521	IL9R	Interleukin 9 receptor
F05	Mmu.13076	XM_001102628	LOC708339	Interleukin-13 receptor subunit alpha-2-like
F06	N/A	XM_001099282	LOC710618	Hypothetical LOC710618
F07	Mmu.16382	XM_001110897	LOC712292	Interleukin-9-like
F08	N/A	XM_001113381	LOC714751	C-C motif chemokine 7-like
F09	N/A	XM_001109808	LOC716099	C-C motif chemokine 26-like
F10	Mmu.10857	NM_001047148	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
F11	Mmu.29	NM_001032915	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
F12	Mmu.12094	XM_001090562	NAMPT	Nicotinamide phosphoribosyltransferase
G01	Mmu.19039	XM_001110148	OSM	Oncostatin M
G02	N/A	XM_001102788	PF4	Platelet factor 4
G03	Mmu.225	XM_001093307	SPP1	Secreted phosphoprotein 1
G04	Mmu.3364	NM_001047149	TNF	Tumor necrosis factor
G05	N/A	XM_001096915	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
G06	Mmu.1012	XM_001084768	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G07	Mmu.15509	XM_001092669	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G08	N/A	XM_001082247	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
G09	N/A	XM_001089169	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
G10	N/A	XM_001101190	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G11	Mmu.3550	XM_001089925	VEGFA	Vascular endothelial growth factor A
G12	Mmu.3715	NM_001032947	XCL1	Chemokine (C motif) ligand 1
H01	Mmu.4974	NM_001033084	ACTB	Actin, beta
H02	Mmu.5037	NM_001047137	B2M	Beta-2-microglobulin
H03	Mmu.3145	XM_001105471	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Mmu.12316	XM_001097691	LOC709186	Hypoxanthine-guanine phosphoribosyltransferase-like
H05	Mmu.2512	XM_001115079	RPL13A	Ribosomal protein L13A
H06	N/A	SA_00125	QGDC	Rhesus Macaque 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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