RT² Profiler PCR Array (Rotor-Gene® Format)

Dog Inflammatory Cytokines & Receptors

Cat. no. 330231 PAFD-011ZR

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 Dog 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 upregulate 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, research studies 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 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	Cfa.28571	XM_545016	AIMP1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A02	Cfa.7153	XM_854757	BMP2	Bone morphogenetic protein 2
A03	N/A	XM_532046	C5	Complement component 5
A04	Cfa.15814	NM_001005252	CCL1	Chemokine (C-C motif) ligand 1
A05	Cfa.15824	NM_001003966	CCL13	Chemokine (C-C motif) ligand 13
A06	Cfa.39521	XM_537724	CCL16	Chemokine (C-C motif) ligand 16
A07	Cfa.3450	NM_001003051	CCL17	Chemokine (C-C motif) ligand 17
A08	Cfa.3851	NM_001003297	CCL2	Chemokine (C-C motif) ligand 2
A09	Cfa.15812	NM_001005254	CCL20	Chemokine (C-C motif) ligand 20
A10	Cfa.15823	NM_001003967	CCL24	Chemokine (C-C motif) ligand 24
A11	Cfa.15813	NM_001005253	CCL26	Chemokine (C-C motif) ligand 26
A12	Cfa.36214	NM_001005251	CCL3	Chemokine (C-C motif) ligand 3
B01	Cfa.15795	NM_001005250	CCL4	Chemokine (C-C motif) ligand 4
B02	Cfa.21	NM_001003010	CCL5	Chemokine (C-C motif) ligand 5
B03	Cfa.16337	NM_001010960	CCL7	Chemokine (C-C motif) ligand 7
B04	Cfa.15810	NM_001005255	CCL8	Chemokine (C-C motif) ligand 8
B05	Cfa.24665	NM_001038606	CCR1	Chemokine (C-C motif) receptor 1
B06	N/A	XM_844228	CCR10	Chemokine (C-C motif) receptor 10
B07	N/A	XM_541906	CCR2	Chemokine (C-C motif) receptor 2
B08	Cfa.30412	NM_001005261	CCR3	Chemokine (C-C motif) receptor 3
B09	Cfa.56	NM_001003020	CCR4	Chemokine (C-C motif) receptor 4
B10	Cfa.16327	NM_001012342	CCR5	Chemokine (C-C motif) receptor 5
B11	N/A	XM_541197	CCR6	Chemokine (C-C motif) receptor 6
B12	N/A	XM_542719	CCR8	Chemokine (C-C motif) receptor 8
C01	Cfa.179	NM_001002981	CD40LG	CD40 ligand
C02	N/A	XM_542136	CD70	CD70 molecule
C03	N/A	XM_849507	CSF1	Colony stimulating factor 1 (macrophage)
C04	Cfa.3784	NM_001003245	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
C05	N/A	XM_845213	CSF3	Colony stimulating factor 3 (granulocyte)
C06	N/A	XM_544391	CX3CL1	Chemokine (C-X3-C motif) ligand 1
C07	N/A	XM_846513	CX3CR1	Chemokine (C-X3-C motif) receptor 1
C08	Cfa.16590	NM_001010949	CXCL10	Chemokine (C-X-C motif) ligand 10
C09	N/A	XM_003640114	CXCL11	Chemokine (C-X-C motif) ligand 11
C10	Cfa.20779	NM_001128097	CXCL12	Chemokine (C-X-C motif) ligand 12
C11	Cfa.16455	XM_845089	CXCL13	Chemokine (C-X-C motif) ligand 13
C12	N/A	XM_849650	CXCL5	Chemokine (C-X-C motif) ligand 5
D01	N/A	XM_536065	CXCR1	Chemokine (C-X-C motif) receptor 1
D02	Cfa.3635	NM_001003151	CXCR2	Interleukin 8 receptor, beta
D03	Cfa.16339	NM_001011887	CXCR3	Chemokine (C-X-C motif) receptor 3
D04	N/A	XM_546496	CXCR5	Chemokine (C-X-C motif) receptor 5
D05	Cfa.4547	XM_848916	FASLG	Fas ligand (TNF superfamily, member 6)
D06	Cfa.3900	NM_001003174	IFNG	Interferon gamma
D07	N/A	XM_848380	IL10RA	Interleukin 10 receptor, alpha
D08	Cfa.35221	XM_535581	IL10RB	Interleukin 10 receptor, beta
D09	N/A	XM_848962	IL11	Interleukin 11
D10	Cfa.3566	NM_001003384	IL13	Interleukin 13
D11	Cfa.131	XM_844053	IL15	Interleukin 15
D12	Cfa.40918	XM_545880	IL16	Interleukin 16
E01	Cfa.47634	NM_001165878	IL17A	Interleukin 17A
E02	N/A	XM_546311	IL17B	Interleukin 17B
E03	N/A	XM_846163	IL17C	Interleukin 17C
E04	N/A	XM_538959	IL17F	Interleukin 17F
E05	Cfa.3645	NM_001003157	IL1A	Interleukin 1, alpha
E06	Cfa.33592	NM_001037971	IL1B	Interleukin 1, beta
E07	N/A	XM_538449	IL1R1	Interleukin 1 receptor, type I
E08	Cfa.3496	NM_001003096	IL1RN	Interleukin 1 receptor antagonist
E09	Cfa.4569	NM_001003347	IL21	Interleukin 21

Position	UniGene	GenBank	Symbol	Description
E10	N/A	XM_844736	IL27	Interleukin 27
E11	Cfa.146	XM_847855	IL2RB	Interleukin 2 receptor, beta
E12	Cfa.40115	NM_001003201	IL2RG	Interleukin 2 receptor, gamma
F01	Cfa.23490	NM_001013835	IL3	Interleukin 3 (colony-stimulating factor, multiple)
F02	Cfa.3672	NM_001003180	IL33	Interleukin 33
F03	Cfa.39	NM_001003159	IL4	Interleukin 4
F04	Cfa.3486	NM_001006950	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
F05	N/A	XM_533759	IL5RA	Interleukin 5 receptor, alpha
F06	N/A	XM_850012	IL6R	Interleukin 6 receptor
F07	Cfa.33585	XM_535239	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
F08	Cfa.36752	NM_001048138	IL7	Interleukin 7
F09	Cfa.3510	NM_001003200	IL8	Interleukin 8
F10	N/A	XM_003431593	IL9	Interleukin 9
F11	N/A	XM_849333	IL9R	Interleukin 9 receptor
F12	N/A	XM_843793	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
G01	Cfa.18302	NM_001033510	LTB	Lymphotoxin beta (TNF superfamily, member 3)
G02	Cfa.39714	XM_540386	NAMPT	Nicotinamide phosphoribosyltransferase
G03	N/A	XM_849644	OSM	Oncostatin M
G04	Cfa.9240	XM_535649	SPP1	Secreted phosphoprotein 1
G05	Cfa.54	NM_001003244	TNF	Tumor necrosis factor
G06	N/A	XM_539146	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
G07	Cfa.20893	NM_001130836	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G08	N/A	XM_846672	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G09	Cfa.4802	XM_536622	TNFSF13	Tumor necrosis factor (ligand) superfamily, member 13
G10	Cfa.47633	NM_001161710	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
G11	N/A	XM_849235	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
G12	Cfa.3581	NM_001110502	VEGFA	Vascular endothelial growth factor A
H01	N/A	NM_001195845	ACTB	Actin, beta
H02	Cfa.29179	XM_535458	B2M	Beta-2-microglobulin
H03	Cfa.39120	NM_001003142	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Cfa.4551	NM_001003357	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Cfa.39145	XM_535529	RPLP1	Ribosomal protein, large, P1
H06	N/A	SA_00130	FGDC	Dog 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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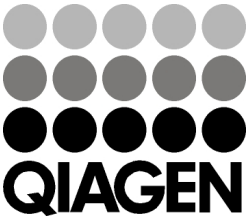

Sample & Assay Technologies