

RT² Profiler PCR Array (Rotor-Gene® Format)

Cow Inflammatory Cytokines & Receptors

Cat. no. 330231 PABT-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 Cow 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*.

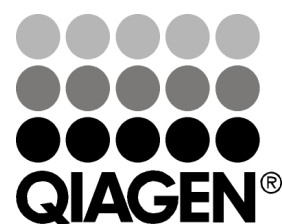
Shipping and storage

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 cyclers (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	Bt.49323	NM_001035018	AIMP1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
A02	Bt.29956	NM_001099141	BMP2	Bone morphogenetic protein 2
A03	Bt.24055	NM_001166616	C5	Complement component 5
A04	Bt.20673	XM_001253011	CCL1	Chemokine (C-C motif) ligand 1
A05	Bt.24326	NM_205773	CCL11	Chemokine (C-C motif) ligand 11
A06	Bt.52492	XM_002695627	CCL16	Chemokine (C-C motif) ligand 16
A07	Bt.101721	XM_001788943	CCL17	Chemokine (C-C motif) ligand 17
A08	Bt.2408	NM_174006	CCL2	Chemokine (C-C motif) ligand 2
A09	Bt.9560	NM_174263	CCL20	Chemokine (C-C motif) ligand 20
A10	Bt.21088	NM_001099162	CCL22	Chemokine (C-C motif) ligand 22
A11	Bt.32408	NM_001046596	CCL24	Chemokine (C-C motif) ligand 24
A12	Bt.23451	NM_001205635	CCL26	Chemokine (C-C motif) ligand 26
B01	Bt.9974	NM_174511	CCL3	Chemokine (C-C motif) ligand 3
B02	Bt.33440	NM_001075147	CCL4	Chemokine (C-C motif) ligand 4
B03	Bt.552	NM_175827	CCL5	Chemokine (C-C motif) ligand 5
B04	Bt.154	NM_174007	CCL8	Chemokine (C-C motif) ligand 8
B05	Bt.62596	NM_001077839	CCR1	Chemokine (C-C motif) receptor 1
B06	Bt.88363	NM_001194964	CCR10	Chemokine (C-C motif) receptor 10
B07	Bt.63814	NM_001194959	CCR2	Chemokine (C-C motif) receptor 2
B08	Bt.28967	NM_001194960	CCR3	Chemokine (C-C motif) receptor 3
B09	Bt.29981	NM_001100293	CCR4	Chemokine (C-C motif) receptor 4
B10	Bt.21331	NM_001011672	CCR5	Chemokine (C-C motif) receptor 5
B11	Bt.106551	NM_001194961	CCR6	Chemokine (C-C motif) receptor 6
B12	Bt.30825	NM_001194962	CCR8	Chemokine (C-C motif) receptor 8
C01	Bt.49	NM_174624	CD40LG	CD40 ligand
C02	Bt.366	NM_174026	CSF1	Colony stimulating factor 1 (macrophage)
C03	Bt.509	NM_174027	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
C04	Bt.4660	NM_174028	CSF3	Colony stimulating factor 3 (granulocyte)
C05	Bt.37607	NM_001102558	CX3CR1	Chemokine (C-X3-C motif) receptor 1
C06	Bt.60947	NM_001046551	CXCL10	Chemokine (C-X-C motif) ligand 10
C07	Bt.18368	NM_001113173	CXCL11	Chemokine (C-X-C motif) ligand 11
C08	Bt.105169	NM_001113174	CXCL12	Chemokine (C-X-C motif) ligand 12
C09	Bt.28088	NM_001015576	CXCL13	Chemokine (C-X-C motif) ligand 13
C10	Bt.611	NM_175700	CXCL2	Chemokine (C-X-C motif) ligand 2
C11	Bt.7165	NM_174300	CXCL5	Chemokine (C-X-C motif) ligand 5
C12	Bt.37553	NM_001113172	CXCL9	Chemokine (C-X-C motif) ligand 9
D01	Bt.4208	NM_001105038	CXCR1	Chemokine (C-X-C motif) receptor 1
D02	Bt.4208	NM_174360	CXCR2	Interleukin 8 receptor, beta
D03	Bt.102154	NM_001011673	CXCR3	Chemokine (C-X-C motif) receptor 3
D04	Bt.37189	NM_001011675	CXCR5	Chemokine (C-X-C motif) receptor 5
D05	Bt.28024	NM_001098859	FASLG	Fas ligand
D06	Bt.188	NM_174086	IFNG	Interferon, gamma
D07	N/A	NM_001205757	IL10RA	Interleukin 10 receptor, alpha
D08	Bt.26552	NM_001076975	IL10RB	Interleukin 10 receptor, beta
D09	Bt.12928	NM_174089	IL13	Interleukin 13
D10	Bt.522	NM_174090	IL15	Interleukin 15
D11	Bt.26527	NM_001075253	IL16	Interleukin 16
D12	Bt.12772	NM_001008412	IL17A	Interleukin 17A
E01	Bt.92113	NM_001192045	IL17B	Interleukin 17B
E02	Bt.22668	NM_001192082	IL17F	Interleukin 17F
E03	Bt.191	NM_174092	IL1A	Interleukin 1, alpha
E04	Bt.4856	NM_174093	IL1B	Interleukin 1, beta
E05	N/A	NM_001206735	IL1R1	Interleukin 1 receptor, type I
E06	Bt.4199	NM_174357	IL1RN	Interleukin 1 receptor antagonist
E07	Bt.23583	NM_198832	IL21	Interleukin 21
E08	Bt.101510	NM_001164653	IL27	Interleukin 27
E09	Bt.87526	XM_002687690	IL2RB	Interleukin 2 receptor, beta

Position	UniGene	GenBank	Symbol	Description
E10	Bt.11080	NM_174359	IL2RG	Interleukin 2 receptor, gamma
E11	Bt.538	NM_173920	IL3	Interleukin 3
E12	Bt.22094	NM_001075297	IL33	Interleukin 33
F01	Bt.423	NM_173921	IL4	Interleukin 4
F02	Bt.5	NM_173922	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
F03	Bt.42822	NM_001110785	IL6R	Interleukin 6 receptor
F04	Bt.66498	XM_002696322	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
F05	Bt.12751	NM_173924	IL7	Interleukin 7
F06	Bt.49740	NM_173925	IL8	Interleukin 8
F07	N/A	XM_002689203	IL9	Interleukin 9
F08	Bt.88629	XM_002683814	IL9R	Interleukin 9 receptor
F09	Bt.37345	NM_001013401	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
F10	Bt.105000	XM_002697371	LTB	Lymphotoxin beta (TNF superfamily, member 3)
F11	Bt.15528	NM_001033608	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
F12	Bt.33608	XM_002686767	NAMPT	Nicotinamide phosphoribosyltransferase
G01	Bt.45038	NM_175713	OSM	Oncostatin M
G02	Bt.11581	NM_001101062	PF4	Platelet factor 4
G03	Bt.10536	NM_174187	SPP1	Secreted phosphoprotein 1
G04	Bt.12756	NM_173966	TNF	Tumor necrosis factor
G05	Bt.40061	NM_001098056	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
G06	Bt.20790	XM_002684917	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G07	N/A	NM_001205770	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
G08	Bt.49553	NM_001034647	TNFSF13	Tumor necrosis factor (ligand) superfamily, member 13
G09	Bt.24855	NM_001114506	TNFSF13B	Tumor necrosis factor (ligand) superfamily, member 13b
G10	Bt.64160	NM_001101855	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
G11	N/A	NM_001205715	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
G12	Bt.4138	NM_174216	VEGFA	Vascular endothelial growth factor A
H01	Bt.14186	NM_173979	ACTB	Actin, beta
H02	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H03	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H04	Bt.22662	NM_001075742	TBP	TATA box binding protein
H05	Bt.88043	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
H06	N/A	SA_00137	BGDC	Cow 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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