

RT² Profiler PCR Array (Rotor-Gene® Format)

Dog Wound Healing

Cat. no. 330231 PAFD-121ZR

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 Dog Wound Healing RT² Profiler PCR Array profiles the expression of 84 key genes central to the wound healing response. Wound healing progresses via three overlapping phases: inflammation, granulation and tissue remodeling. After cutaneous injury, a blood clot forms, and inflammatory cells infiltrate the wound, secreting cytokines and growth factors to promote the inflammation phase. During the granulation phase, fibroblasts and other cells differentiate into myofibroblasts, which deposit extracellular matrix (ECM) proteins. Simultaneously, angiogenesis occurs, and keratinocytes proliferate and migrate to close the wound. In the final tissue remodeling phase, apoptosis eliminates myofibroblasts and extraneous blood vessels, and the ECM is remodeled to resemble the original tissue. Dysregulation of this last tissue remodeling phase leads to fibrosis.

This array contains genes important for each of the three phases of wound healing, including ECM remodeling factors, inflammatory cytokines and chemokines, as well as growth factors and major signaling molecules. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in wound healing, tissue injury and repair with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.

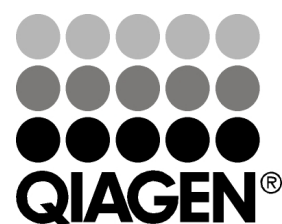
Shipping and storage

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	Assay
A01	N/A	XM_534781	ACTA2	Actin, alpha 2, smooth muscle, aorta	PPF02806A
A02	N/A	XM_535424	ACTC1	Actin, alpha, cardiac muscle 1	PPF03226A
A03	Cfa.3523	NM_001005754	ANGPT1	Angiotensinogen 1	PPF00235A
A04	Cfa.3851	NM_001003297	CCL2	Chemokine (C-C motif) ligand 2	PPF00532A
A05	Cfa.16337	NM_001010960	CCL7	Chemokine (C-C motif) ligand 7	PPF10712A
A06	Cfa.179	NM_001002981	CD40LG	CD40 ligand	PPF00068A
A07	Cfa.3488	NM_001287125	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)	PPF00589A
A08	N/A	XM_005627893	COL14A1	Collagen, type XIV, alpha 1	PPF01167A
A09	Cfa.100	NM_001003090	COL1A1	Collagen, type I, alpha 1	PPF00230A
A10	Cfa.1262	NM_001003187	COL1A2	Collagen, type I, alpha 2	PPF00391A
A11	Cfa.3093	XM_845916	COL3A1	Collagen, type III, alpha 1	PPF03607A
A12	Cfa.208	XM_014106444	COL4A1	Collagen, type IV, alpha 1	PPF00094A
B01	Cfa.3705	XM_005635768	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)	PPF00406A
B02	N/A	XM_014116870	COL5A1	Collagen, type V, alpha 1	PPF04824A
B03	N/A	XM_005640393	COL5A2	Collagen, type V, alpha 2	PPF03608A
B04	N/A	XM_014122206	COL5A3	Collagen, type V, alpha 3	PPF07189A
B05	Cfa.3784	NM_001003245	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)	PPF00477A
B06	N/A	XM_005624543	CSF3	Colony stimulating factor 3 (granulocyte)	PPF11809A
B07	N/A	XM_003638769	CTGF	Connective tissue growth factor-like	PPF14181A
B08	Cfa.415	NM_001137652	CTNBN1	Catenin (cadherin-associated protein), beta 1, 88kDa	PPF02450A
B09	Cfa.23853	XM_845595	CTSG	Cathepsin G	PPF11934A
B10	Cfa.588	NM_001033996	CTSK	Cathepsin K	PPF12053A
B11	N/A	XM_003640114	CXCL11	Chemokine (C-X-C motif) ligand 11	PPF18151A
B12	Cfa.47274	NM_001128097	CXCL12	Chemokine (C-X-C motif) ligand 12	PPF00696A
C01	N/A	XM_849650	CXCL5	Chemokine (C-X-C motif) ligand 5	PPF13384A
C02	Cfa.3762	NM_001003228	DCN	Decorin	PPF00458A
C03	Cfa.3524	NM_001003094	EGF	Epidermal growth factor	PPF00236A
C04	Cfa.3903	XM_014120756	EGFR	Epidermal growth factor receptor	PPF00572A
C05	N/A	XM_535876	F13A1	Coagulation factor XIII, A1 polypeptide	PPF03531A
C06	Cfa.24096	NM_001024640	F3	Coagulation factor III (thromboplastin, tissue factor)	PPF10159A
C07	N/A	XM_532697	FGA	Fibrinogen alpha chain	PPF01430A
C08	N/A	XM_005619337	FGF10	Fibroblast growth factor 10	PPF13617A
C09	Cfa.3716	XM_003432481	FGF2	Fibroblast growth factor 2 (basic)	PPF00420A
C10	Cfa.3776	NM_001003237	FGF7	Fibroblast growth factor 7	PPF00469A
C11	N/A	XM_005617276	HBEGF	Heparin-binding EGF-like growth factor	PPF11309A
C12	Cfa.3443	NM_001002964	HGF	Hepatocyte growth factor (hepatopoietin A; scatter factor)	PPF00046A
D01	Cfa.3900	NM_001003174	IFNG	Interferon gamma	PPF00369A
D02	Cfa.3888	NM_001313855	IGF1	Insulin-like growth factor 1 (somatomedin C)	PPF12664A
D03	Cfa.38	NM_001003077	IL10	Interleukin 10	PPF00207A
D04	Cfa.33592	NM_001037971	IL1B	Interleukin 1, beta	PPF00525A
D05	Cfa.7	NM_001003305	IL2	Interleukin 2	PPF00540A
D06	Cfa.39	NM_001003159	IL4	Interleukin 4	PPF00353A
D07	Cfa.3528	NM_001003301	IL6	Interleukin 6 (interferon, beta 2)	PPF00536A
D08	Cfa.19690	NM_001287021	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)	PPF00133A
D09	N/A	XM_005619335	ITGA1	Integrin, alpha 1	PPF09548A
D10	N/A	XM_005619334	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	PPF09547A
D11	N/A	XM_005624631	ITGA3	Similar to integrin alpha 3 isoform b, precursor	PPF15880A
D12	N/A	XM_545551	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)	PPF09092A
E01	N/A	XM_005636739	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	PPF08036A
E02	N/A	XM_535964	ITGA6	Integrin, alpha 6	PPF03586A
E03	N/A	XM_014110784	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)	PPF09096B
E04	N/A	XM_005616948	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	PPF03043A
E05	Cfa.3641	NM_001003162	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	PPF00356A
E06	N/A	XM_846152	ITGB5	Integrin, beta 5	PPF12116A

Position	UniGene	GenBank	Symbol	Description	Assay
E07	N/A	XM_005640230	ITGB6	Integrin, beta 6	PPF09058A
E08	Cfa.150	NM_001197073	LIF	Leukemia inhibitory factor (cholinergic differentiation factor)	PPF00051A
E09	Cfa.2796	NM_001110800	MAPK1	Mitogen-activated protein kinase 1	PPF02798A
E10	Cfa.33452	NM_001252035	MAPK3	Mitogen-activated protein kinase 3	PPF08194A
E11	N/A	XM_546546	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)	PPF09673A
E12	Cfa.3597	XM_014109407	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	PPF00308A
F01	Cfa.22342	NM_001242726	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)	PPF09676A
F02	Cfa.3470	NM_001003219	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	PPF00446A
F03	Cfa.36580	NM_001190172	PDGFA	Platelet-derived growth factor alpha polypeptide	PPF10889A
F04	N/A	XM_539955	PLAT	Plasminogen activator, tissue	PPF05985A
F05	Cfa.127	NM_001194952	PLAU	Plasminogen activator, urokinase	PPF00033A
F06	N/A	XM_014119989	PLAUR	Plasminogen activator, urokinase receptor	PPF02057A
F07	Cfa.3464	NM_001286960	PLG	Plasminogen	PPF00182A
F08	Cfa.3695	NM_001003192	PTEN	Phosphatase and tensin homolog	PPF00398A
F09	Cfa.3449	NM_001003354	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)	PPF00599A
F10	Cfa.40290	NM_001003274	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	PPF00507A
F11	Cfa.20231	NM_001003273	RHOA	Ras homolog gene family, member A	PPF00506A
F12	Cfa.109	NM_001197095	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	PPF00076A
G01	N/A	XM_548090	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)	PPF10603A
G02	N/A	XM_536561	TAGLN	Transgelin	PPF03993A
G03	Cfa.133	XM_014117458	TGFA	Transforming growth factor, alpha	PPF00036A
G04	Cfa.3509	NM_001003309	TGFB1	Transforming growth factor, beta 1	PPF00546A
G05	N/A	XM_005621935	TGFBR3	Transforming growth factor, beta receptor III	PPF10163A
G06	N/A	XM_005638821	TIAM1	T-cell lymphoma invasion and metastasis 1	PPF08762A
G07	Cfa.3680	NM_001003182	TIMP1	TIMP metalloproteinase inhibitor 1	PPF00383A
G08	Cfa.54	NM_001003244	TNF	Tumor necrosis factor	PPF00476A
G09	Cfa.3581	NM_001110502	VEGFA	Vascular endothelial growth factor A	PPF00370B
G10	N/A	XM_848947	VTN	Vitronectin	PPF04783A
G11	N/A	XM_005628298	WISP1	WNT1 inducible signaling pathway protein 1	PPF05590A
G12	Cfa.47426	NM_001287075	WNT5A	Wingless-type MMTV integration site family, member 5A	PPF07032A
H01	Cfa.17735	NM_001195845	ACTB	Actin, beta	PPF12880A
H02	N/A	XM_535458	B2M	Beta-2-microglobulin	PPF03253A
H03	Cfa.36213	NM_001003142	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPF00328A
H04	Cfa.4551	NM_001003357	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPF00602A
H05	N/A	XM_014109387	RPLP1	Ribosomal protein, large, P1	PPF03305A
H06	N/A	SA_00130	FGDC	Dog Genomic DNA Contamination	PPF68934A
H07	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H08	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H09	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H10	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H11	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H12	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A

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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