

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Dog Fibrosis

Cat. no. 330231 PAFD-120ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT ² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Dog Fibrosis RT² Profiler PCR Array profiles the expression of 84 key genes involved in dysregulated tissue remodeling during the repair and healing of wounds. Wound healing consists of three phases: inflammation, granulation and tissue remodeling. During tissue remodeling, apoptosis removes myofibroblasts, and the deposited extracellular matrix (ECM) is remodeled to resemble the original tissue. Fibrosis occurs when inappropriate tissue remodeling results in excess ECM deposition due to inappropriate survival of myofibroblasts or lack of ECM proteolytic degradation. The inflammation and enhanced TGFβ signaling often present in fibrotic tissues causes cells to differentiate into myofibroblasts via epithelial-to-mesenchymal transition (EMT). On the other side of the spectrum, chronic wounds feature dysregulated tissue remodeling with enhanced ECM degradation. This array contains genes encoding ECM remodeling enzymes, TGFβ signaling molecules and inflammatory cytokines, as well as additional genes important for fibrosis. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in fibrosis and chronic wounds with this array.

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

Shipping and storage

RT² Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT² Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

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 (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ABL1	ACTA2	AGT	AKT1	BCL2	BMP7	CAV1	CCL2	CCL3	LOC484790	CCR7	COL1A2
B	COL3A1	CREBBP	CTGF	CXCR4	DCN	EDN1	EGF	ENG	FASLG	GREM1	HGF	IFNG
C	IL10	IL13	IL13RA2	IL1A	IL1B	IL4	IL5	ILK	INHBE	ITGA1	ITGA2	ITGA3
D	ITGAV	ITGB1	ITGB3	ITGB5	ITGB6	ITGB8	JUN	LOX	LTBP1	MMP1	MMP13	MMP14
E	MMP2	MMP3	MMP8	MMP9	MYC	NFKB1	PDGFA	PDGFB	PLAT	PLAU	PLG	SERPINA1
F	SERPINE1	SERPINH1	SMAD2	SMAD3	SMAD4	SMAD6	SMAD7	SNAI1	SP1	STAT1	STAT6	TGFB1
G	TGFB2	TGFB3	TGFBF1	TGFBF2	TGIF1	THBS1	THBS2	TIMP1	TIMP2	TIMP3	TNF	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPLP1	FGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	N/A	XM_548413	ABL1	C-abl oncogene 1, non-receptor tyrosine kinase	PPF10809A
A02	N/A	XM_534781	ACTA2	Actin, alpha 2, smooth muscle, aorta	PPF02806A
A03	Cfa.3646	XM_005618833	AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	PPF00351A
A04	N/A	XM_005623876	AKT1	V-akt murine thymoma viral oncogene homolog 1	PPF10547A
A05	Cfa.110	NM_001002949	BCL2	B-cell CLL/lymphoma 2	PPF00024A
A06	Cfa.8	NM_001197052	BMP7	Bone morphogenetic protein 7	PPF02615A
A07	Cfa.3850	NM_001003296	CAV1	Caveolin 1, caveolae protein, 22kDa	PPF00531A
A08	Cfa.3851	NM_001003297	CCL2	Chemokine (C-C motif) ligand 2	PPF00532A
A09	Cfa.36214	NM_001005251	CCL3	Chemokine (C-C motif) ligand 3	PPF00668A
A10	N/A	XM_005632630	LOC484790	C-C motif chemokine receptor 2	PPF07084A
A11	N/A	XM_548131	CCR7	Chemokine (C-C motif) receptor 7	PPF10627A
A12	Cfa.1262	NM_001003187	COL1A2	Collagen, type I, alpha 2	PPF00391A
B01	Cfa.3093	XM_845916	COL3A1	Collagen, type III, alpha 1	PPF03607A
B02	N/A	XM_003434864	CREBBP	CREB binding protein	PPF04285A
B03	N/A	XM_003638769	CTGF	Connective tissue growth factor-like	PPF14181A
B04	Cfa.16645	NM_001048026	CXCR4	Chemokine (C-X-C motif) receptor 4	PPF06593A
B05	Cfa.3762	NM_001003228	DCN	Decorin	PPF00458A
B06	Cfa.125	NM_001002956	EDN1	Endothelin 1	PPF00032A
B07	Cfa.3524	NM_001003094	EGF	Epidermal growth factor	PPF00236A
B08	N/A	XM_005625330	ENG	Endoglin	PPF12205A
B09	Cfa.4547	NM_001287153	FASLG	Fas ligand (TNF superfamily, member 6)	PPF00624A
B10	N/A	XM_005638201	GREM1	Gremlin 1, DAN family BMP antagonist	PPF08617A
B11	Cfa.3443	NM_001002964	HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)	PPF00046A
B12	Cfa.3900	NM_001003174	IFNG	Interferon gamma	PPF00369A
C01	Cfa.38	NM_001003077	IL10	Interleukin 10	PPF00207A
C02	Cfa.3566	NM_001003384	IL13	Interleukin 13	PPF00643A
C03	Cfa.40284	NM_001003075	IL13RA2	Interleukin 13 receptor, alpha 2	PPF00201A
C04	Cfa.3645	NM_001003157	IL1A	Interleukin 1, alpha	PPF00350A
C05	Cfa.33592	NM_001037971	IL1B	Interleukin 1, beta	PPF00525A
C06	Cfa.39	NM_001003159	IL4	Interleukin 4	PPF00353A
C07	Cfa.3486	NM_001006950	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)	PPF00358A
C08	N/A	XM_534040	ILK	Integrin-linked kinase	PPF02329A
C09	N/A	XM_844366	INHBE	Inhibin, beta E	PPF11506A
C10	N/A	XM_005619335	ITGA1	Integrin, alpha 1	PPF09548A
C11	N/A	XM_005619334	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	PPF09547A
C12	N/A	XM_005624631	ITGA3	Similar to integrin alpha 3 isoform b, precursor	PPF15880A
D01	N/A	XM_014110784	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)	PPF09096B
D02	N/A	XM_005616948	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	PPF03043A
D03	Cfa.3641	NM_001003162	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	PPF00356A
D04	N/A	XM_846152	ITGB5	Integrin, beta 5	PPF12116A
D05	N/A	XM_005640230	ITGB6	Integrin, beta 6	PPF09058A
D06	N/A	XM_005628606	ITGB8	Integrin, beta 8	PPF01275A
D07	N/A	XM_005620245	JUN	Jun proto-oncogene	PPF12311A

Position	UniGene	GenBank	Symbol	Description	Assay
D08	N/A	XM_538599	LOX	Lysyl oxidase	PPF05254A
D09	Cfa.23392	XM_005630317	LTBP1	Latent transforming growth factor beta binding protein 1	PPF01588A
D10	N/A	XM_546546	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)	PPF09673A
D11	Cfa.3628	XM_536598	MMP13	Matrix metalloproteinase 13 (collagenase 3)	PPF00335A
D12	Cfa.3690	XM_851854	MMP14	Matrix metalloproteinase 14 (membrane-inserted)	PPF00390A
E01	Cfa.3597	XM_014109407	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	PPF00308A
E02	Cfa.3447	NM_001002967	MMP3	Matrix metalloproteinase 3 (stromelysin 1, procollagenase)	PPF00049A
E03	N/A	XM_546547	MMP8	Matrix metalloproteinase 8 (neutrophil collagenase)	PPF09674A
E04	Cfa.3470	NM_001003219	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	PPF00446A
E05	Cfa.3786	NM_001003246	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)	PPF00478A
E06	Cfa.10766	NM_001003344	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1	PPF00590A
E07	Cfa.36580	NM_001190172	PDGFA	Platelet-derived growth factor alpha polypeptide	PPF10889A
E08	Cfa.3913	NM_001003383	PDGFB	Platelet-derived growth factor beta polypeptide	PPF00639A
E09	N/A	XM_539955	PLAT	Plasminogen activator, tissue	PPF05985A
E10	Cfa.127	NM_001194952	PLAU	Plasminogen activator, urokinase	PPF00033A
E11	Cfa.3464	NM_001286960	PLG	Plasminogen	PPF00182A
E12	Cfa.5989	NM_001080109	SERPINA1	Serpin peptidase inhibitor, clade A (alpha-1 antitrypsinase, antitrypsin), member 1	PPF04651A
F01	Cfa.109	NM_001197095	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	PPF00076A
F02	Cfa.6125	NM_001165888	SERPINH1	Serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1)	PPF07322A
F03	N/A	XM_005622830	SMAD2	SMAD family member 2	PPF04481A
F04	Cfa.43487	NM_001170829	SMAD3	SMAD family member 3	PPF12929A
F05	N/A	XM_005615393	SMAD4	SMAD family member 4	PPF01906A
F06	N/A	XM_544737	SMAD6	SMAD family member 6	PPF08705A
F07	N/A	XM_005623131	SMAD7	SMAD family member 7	PPF10390A
F08	N/A	XM_005635167	SNAI1	Snail family zinc finger 1	PPF07725A
F09	N/A	XM_005636771	SP1	Sp1 transcription factor	PPF08044A
F10	N/A	XM_843260	STAT1	Signal transducer and activator of transcription 1, 91kDa	PPF09104A
F11	Cfa.47144	XM_003431442	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced	PPF18155A
F12	Cfa.3509	NM_001003309	TGFB1	Transforming growth factor, beta 1	PPF00546A
G01	Cfa.3367	XM_545713	TGFB2	Transforming growth factor, beta 2	PPF09191A
G02	Cfa.24656	XM_849026	TGFB3	Transforming growth factor, beta 3	PPF10506A
G03	N/A	XM_014117881	TGFBR1	Transforming growth factor, beta receptor 1	PPF05340A
G04	Cfa.128	XM_005634331	TGFBR2	Transforming growth factor, beta receptor II (70/80kDa)	PPF02455A
G05	N/A	XM_014115536	TGIF1	Similar to TG-interacting factor isoform c	PPF15805A
G06	N/A	XM_544610	THBS1	Thrombospondin 1	PPF08622A
G07	Cfa.12249	NM_001197156	THBS2	Thrombospondin 2	PPF06684A
G08	Cfa.3680	NM_001003182	TIMP1	TIMP metalloproteinase inhibitor 1	PPF00383A
G09	Cfa.3497	NM_001003082	TIMP2	TIMP metalloproteinase inhibitor 2	PPF00212A
G10	Cfa.39892	NM_001284439	TIMP3	TIMP metalloproteinase inhibitor 3	PPF05163A
G11	Cfa.54	NM_001003244	TNF	Tumor necrosis factor	PPF00476A
G12	Cfa.3581	NM_001110502	VEGFA	Vascular endothelial growth factor A	PPF00370B
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 qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT ² SYBR Green ROX [™] qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT ² SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

* 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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