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

Human Fibrosis

Cat. no. 330231 PAHS-120ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² 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
RT² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
RT² Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT² Profiler PCR Array, Format F	Roche® LightCycler® 480 (96-well block)
RT² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT² Profiler PCR Array, Format H	Fluidigm® BioMark™

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Description

The Human 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 TGFß 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, TGFß 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	ACTA2	AGT	AKT1	BCL2	BMP7	CAV1	CCL11	CCL2	CCL3	CCR2	CEBPB	COL1A2
B	COL3A1	CTGF	CXCR4	DCN	EDN1	EGF	ENG	FASLG	GREM1	HGF	IFNG	IL10
C	IL13	IL13RA2	IL1A	IL1B	IL4	IL5	ILK	INHBE	ITGA1	ITGA2	ITGA3	ITGAV
D	ITGB1	ITGB3	ITGB5	ITGB6	ITGB8	JUN	LOX	LTBP1	MMP1	MMP13	MMP14	MMP2
E	MMP3	MMP8	MMP9	MYC	NFKB1	PDGFA	PDGFB	PLAT	PLAU	PLG	SERPINA1	SERPINE1
F	SERPINH1	SMAD2	SMAD3	SMAD4	SMAD6	SMAD7	SNAI1	SP1	STAT1	STAT6	TGFB1	TGFB2
G	TGFB3	TGFBR1	TGFBR2	TGIF1	THBS1	THBS2	TIMP1	TIMP2	TIMP3	TIMP4	TNF	VEGFA
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.500483	NM_001613	ACTA2	Actin, alpha 2, smooth muscle, aorta
A02	Hs.19383	NM_000029	AGT	Angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
A03	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A04	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
A05	Hs.473163	NM_001719	BMP7	Bone morphogenetic protein 7
A06	Hs.74034	NM_001753	CAV1	Caveolin 1, caveolae protein, 22kDa
A07	Hs.54460	NM_002986	CCL11	Chemokine (C-C motif) ligand 11
A08	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A09	Hs.514107	NM_002983	CCL3	Chemokine (C-C motif) ligand 3
A10	Hs.511794	NM_001123396	CCR2	Chemokine (C-C motif) receptor 2
A11	Hs.517106	NM_005194	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
A12	Hs.489142	NM_000089	COL1A2	Collagen, type I, alpha 2
B01	Hs.443625	NM_000090	COL3A1	Collagen, type III, alpha 1
B02	Hs.591346	NM_001901	CTGF	Connective tissue growth factor
B03	Hs.593413	NM_003467	CXCR4	Chemokine (C-X-C motif) receptor 4
B04	Hs.728830	NM_001920	DCN	Decorin
B05	Hs.511899	NM_001955	EDN1	Endothelin 1
B06	Hs.419815	NM_001963	EGF	Epidermal growth factor
B07	Hs.76753	NM_000118	ENG	Endoglin
B08	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
B09	Hs.40098	NM_013372	GREM1	Gremlin 1
B10	Hs.396530	NM_000601	HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)
B11	Hs.856	NM_000619	IFNG	Interferon, gamma
B12	Hs.193717	NM_000572	IL10	Interleukin 10
C01	Hs.845	NM_002188	IL13	Interleukin 13
C02	Hs.336046	NM_000640	IL13RA2	Interleukin 13 receptor, alpha 2
C03	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
C04	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
C05	Hs.73917	NM_000589	IL4	Interleukin 4
C06	Hs.2247	NM_000879	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
C07	Hs.5158	NM_004517	ILK	Integrin-linked kinase
C08	Hs.632713	NM_031479	INHBE	inhibin, beta E
C09	Hs.644352	NM_181501	ITGA1	Integrin, alpha 1
C10	Hs.482077	NM_002203	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
C11	Hs.265829	NM_002204	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)
C12	Hs.436873	NM_002210	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
D01	Hs.643813	NM_002211	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
D02	Hs.218040	NM_000212	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
D03	Hs.536663	NM_002213	ITGB5	Integrin, beta 5
D04	Hs.470399	NM_000888	ITGB6	Integrin, beta 6
D05	Hs.592171	NM_002214	ITGB8	Integrin, beta 8
D06	Hs.714791	NM_002228	JUN	Jun proto-oncogene
D07	Hs.102267	NM_002317	LOX	Lysyl oxidase
D08	Hs.713533	NM_000627	LTBP1	Latent transforming growth factor beta binding protein 1

Position	UniGene	GenBank	Symbol	Description
D09	Hs.83169	NM_002421	MMP1	Matrix metallopeptidase 1 (interstitial collagenase)
D10	Hs.2936	NM_002427	MMP13	Matrix metallopeptidase 13 (collagenase 3)
D11	Hs.2399	NM_004995	MMP14	Matrix metallopeptidase 14 (membrane-inserted)
D12	Hs.513617	NM_004530	MMP2	Matrix metallopeptidase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
E01	Hs.375129	NM_002422	MMP3	Matrix metallopeptidase 3 (stromelysin 1, progelatinase)
E02	Hs.161839	NM_002424	MMP8	Matrix metallopeptidase 8 (neutrophil collagenase)
E03	Hs.297413	NM_004994	MMP9	Matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
E04	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
E05	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
E06	Hs.535898	NM_002607	PDGFA	Platelet-derived growth factor alpha polypeptide
E07	Hs.1976	NM_002608	PDGFB	Platelet-derived growth factor beta polypeptide
E08	Hs.491582	NM_000930	PLAT	Plasminogen activator, tissue
E09	Hs.77274	NM_002658	PLAU	Plasminogen activator, urokinase
E10	Hs.143436	NM_000301	PLG	Plasminogen
E11	Hs.525557	NM_000295	SERPINA1	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1
E12	Hs.414795	NM_000602	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
F01	Hs.596449	NM_001235	SERPINH1	Serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1)
F02	Hs.12253	NM_005901	SMAD2	SMAD family member 2
F03	Hs.714621	NM_005902	SMAD3	SMAD family member 3
F04	Hs.75862	NM_005359	SMAD4	SMAD family member 4
F05	Hs.153863	NM_005585	SMAD6	SMAD family member 6
F06	Hs.465087	NM_005904	SMAD7	SMAD family member 7
F07	Hs.48029	NM_005985	SNAI1	Snail homolog 1 (Drosophila)
F08	Hs.620754	NM_138473	SP1	Sp1 transcription factor
F09	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
F10	Hs.524518	NM_003153	STAT6	Signal transducer and activator of transcription 6, interleukin-4 induced
F11	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
F12	Hs.133379	NM_003238	TGFB2	Transforming growth factor, beta 2
G01	Hs.592317	NM_003239	TGFB3	Transforming growth factor, beta 3
G02	Hs.494622	NM_004612	TGFBR1	Transforming growth factor, beta receptor 1
G03	Hs.604277	NM_003242	TGFBR2	Transforming growth factor, beta receptor II (70/80kDa)
G04	Hs.373550	NM_003244	TGIF1	TGFB-induced factor homeobox 1
G05	Hs.164226	NM_003246	THBS1	Thrombospondin 1
G06	Hs.371147	NM_003247	THBS2	Thrombospondin 2
G07	Hs.522632	NM_003254	TIMP1	TIMP metallopeptidase inhibitor 1
G08	Hs.633514	NM_003255	TIMP2	TIMP metallopeptidase inhibitor 2
G09	Hs.644633	NM_000362	TIMP3	TIMP metallopeptidase inhibitor 3
G10	Hs.591665	NM_003256	TIMP4	TIMP metallopeptidase inhibitor 4
G11	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G12	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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 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
RT² 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
RT² 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.

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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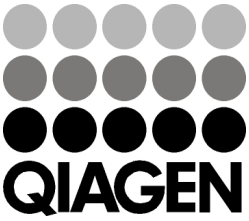

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