

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

Human Wound Healing

Cat. no. 330231 PAHS-121ZA

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 Human 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 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	ACTC1	ANGPT1	CCL2	CCL7	CD40LG	CDH1	COL14A1	COL1A1	COL1A2	COL3A1	COL4A1
B	COL4A3	COL5A1	COL5A2	COL5A3	CSF2	CSF3	CTGF	CTNNB1	CTSG	CTSK	CTS2	CXCL1
C	CXCL11	CXCL2	CXCL5	EGF	EGFR	F13A1	F3	FGA	FGF10	FGF2	FGF7	HBEGF
D	HGF	IFNG	IGF1	IL10	IL1B	IL2	IL4	IL6	IL6ST	ITGA1	ITGA2	ITGA3
E	ITGA4	ITGA5	ITGA6	ITGAV	ITGB1	ITGB3	ITGB5	ITGB6	MAPK1	MAPK3	MIF	MMP1
F	MMP2	MMP7	MMP9	PDGFA	PLAT	PLAU	PLAUR	PLG	PTEN	PTGS2	RAC1	RHOA
G	SERPINE1	STAT3	TAGLN	TGFA	TGFB1	TGFB3	TIMP1	TNF	VEGFA	VTN	WISP1	WNT5A
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.118127	NM_005159	ACTC1	Actin, alpha, cardiac muscle 1
A03	Hs.369675	NM_001146	ANGPT1	Angiopoietin 1
A04	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
A05	Hs.251526	NM_006273	CCL7	Chemokine (C-C motif) ligand 7
A06	Hs.592244	NM_000074	CD40LG	CD40 ligand
A07	Hs.461086	NM_004360	CDH1	Cadherin 1, type 1, E-cadherin (epithelial)
A08	Hs.409662	NM_021110	COL14A1	Collagen, type XIV, alpha 1
A09	Hs.172928	NM_000088	COL1A1	Collagen, type I, alpha 1
A10	Hs.489142	NM_000089	COL1A2	Collagen, type I, alpha 2
A11	Hs.443625	NM_000090	COL3A1	Collagen, type III, alpha 1
A12	Hs.17441	NM_001845	COL4A1	Collagen, type IV, alpha 1
B01	Hs.570065	NM_000091	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)
B02	Hs.210283	NM_000093	COL5A1	Collagen, type V, alpha 1
B03	Hs.445827	NM_000393	COL5A2	Collagen, type V, alpha 2
B04	Hs.235368	NM_015719	COL5A3	Collagen, type V, alpha 3
B05	Hs.1349	NM_000758	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)
B06	Hs.2233	NM_000759	CSF3	Colony stimulating factor 3 (granulocyte)
B07	Hs.591346	NM_001901	CTGF	Connective tissue growth factor
B08	Hs.476018	NM_001904	CTNNB1	Catenin (cadherin-associated protein), beta 1, 88kDa
B09	Hs.421724	NM_001911	CTSG	Cathepsin G
B10	Hs.632466	NM_000396	CTSK	Cathepsin K
B11	Hs.660866	NM_001333	CTS2	Cathepsin L2
B12	Hs.789	NM_001511	CXCL1	Chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
C01	Hs.632592	NM_005409	CXCL11	Chemokine (C-X-C motif) ligand 11
C02	Hs.590921	NM_002089	CXCL2	Chemokine (C-X-C motif) ligand 2
C03	Hs.89714	NM_002994	CXCL5	Chemokine (C-X-C motif) ligand 5
C04	Hs.419815	NM_001963	EGF	Epidermal growth factor
C05	Hs.488293	NM_005228	EGFR	Epidermal growth factor receptor
C06	Hs.335513	NM_000129	F13A1	Coagulation factor XIII, A1 polypeptide
C07	Hs.62192	NM_001993	F3	Coagulation factor III (thromboplastin, tissue factor)
C08	Hs.351593	NM_000508	FGA	Fibrinogen alpha chain
C09	Hs.664499	NM_004465	FGF10	Fibroblast growth factor 10
C10	Hs.284244	NM_002006	FGF2	Fibroblast growth factor 2 (basic)
C11	Hs.567268	NM_002009	FGF7	Fibroblast growth factor 7
C12	Hs.799	NM_001945	HBEGF	Heparin-binding EGF-like growth factor
D01	Hs.396530	NM_000601	HGF	Hepatocyte growth factor (hepapoietin A; scatter factor)
D02	Hs.856	NM_000619	IFNG	Interferon, gamma
D03	Hs.160562	NM_000618	IGF1	Insulin-like growth factor 1 (somatomedin C)
D04	Hs.193717	NM_000572	IL10	Interleukin 10
D05	Hs.126256	NM_000576	IL1B	Interleukin 1, beta
D06	Hs.89679	NM_000586	IL2	Interleukin 2
D07	Hs.73917	NM_000589	IL4	Interleukin 4
D08	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D09	Hs.532082	NM_002184	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)

Position	UniGene	GenBank	Symbol	Description
D10	Hs.644352	NM_181501	ITGA1	Integrin, alpha 1
D11	Hs.482077	NM_002203	ITGA2	Integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)
D12	Hs.265829	NM_002204	ITGA3	Integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)
E01	Hs.694732	NM_000885	ITGA4	Integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)
E02	Hs.505654	NM_002205	ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
E03	Hs.133397	NM_000210	ITGA6	Integrin, alpha 6
E04	Hs.436873	NM_002210	ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)
E05	Hs.643813	NM_002211	ITGB1	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
E06	Hs.218040	NM_000212	ITGB3	Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)
E07	Hs.536663	NM_002213	ITGB5	Integrin, beta 5
E08	Hs.470399	NM_000888	ITGB6	Integrin, beta 6
E09	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
E10	Hs.861	NM_002746	MAPK3	Mitogen-activated protein kinase 3
E11	Hs.407995	NM_002415	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
E12	Hs.83169	NM_002421	MMP1	Matrix metalloproteinase 1 (interstitial collagenase)
F01	Hs.513617	NM_004530	MMP2	Matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)
F02	Hs.2256	NM_002423	MMP7	Matrix metalloproteinase 7 (matrilysin, uterine)
F03	Hs.297413	NM_004994	MMP9	Matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
F04	Hs.535898	NM_002607	PDGFA	Platelet-derived growth factor alpha polypeptide
F05	Hs.491582	NM_000930	PLAT	Plasminogen activator, tissue
F06	Hs.77274	NM_002658	PLAU	Plasminogen activator, urokinase
F07	Hs.466871	NM_002659	PLAUR	Plasminogen activator, urokinase receptor
F08	Hs.143436	NM_000301	PLG	Plasminogen
F09	Hs.500466	NM_000314	PTEN	Phosphatase and tensin homolog
F10	Hs.196384	NM_000963	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
F11	Hs.413812	NM_006908	RAC1	Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
F12	Hs.247077	NM_001664	RHOA	Ras homolog gene family, member A
G01	Hs.414795	NM_000602	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
G02	Hs.463059	NM_003150	STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)
G03	Hs.503998	NM_003186	TAGLN	Transgelin
G04	Hs.170009	NM_003236	TGFA	Transforming growth factor, alpha
G05	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
G06	Hs.482390	NM_003243	TGFBR3	Transforming growth factor, beta receptor III
G07	Hs.522632	NM_003254	TIMP1	TIMP metalloproteinase inhibitor 1
G08	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G09	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
G10	Hs.2257	NM_000638	VTN	Vitronectin
G11	Hs.492974	NM_003882	WISP1	WNT1 inducible signaling pathway protein 1
G12	Hs.696364	NM_003392	WNT5A	Wingless-type MMTV integration site family, member 5A
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.
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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